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## ORIGINAL COMMUNICATIONS.

### A CASE OF CHRONIC, LEFT-SIDED HEMIPLEGIA, WITH EMBOLISM OR THROMBOSIS OF THE RIGHT BRACHIAL ARTERY, OCCURRING IN THE PUERPERAL PERIOD—PARTIAL RECOVERY—WITH REMARKS.

*Read before the Philadelphia County Medical Society,  
November 22, 1882.*

BY EDWARD R. STONE, M.D.

AMONG the many diseases and accidents of pregnancy, those involving the brain in a destructive lesion are not commonly met with. The following case is of interest, therefore, as illustrating a rare complication, and also because it presented unmistakable signs of embolism in the arm, which have an important bearing upon the diagnosis of the cerebral disease:

Mrs. W., æt. 36. Health has always been good. Has never had syphilis or rheumatism. She has been pregnant five times. The first pregnancy resulted in a healthy infant at term, who is living. The second and third were miscarriages at the third or fourth month. In the fourth the foetus was born at term, but died in less than a year, of teething and diarrhoea. The fifth pregnancy progressed naturally until about the middle of the fifth month, when she had symptoms of supposed asthma and bronchitis. These symptoms disappeared in about two weeks, and with them the movements of the foetus ceased. Labor came on about ten days after she had no longer felt life.

I was called to attend early in the morning of April 3, 1882, and ascertained that the pains had continued since midnight, but had at this time ceased. On examination, a somewhat softened and macerated foetus was found to have been expelled, except the head and shoulder. Some force was needed to disengage the head, as the neck was firmly held in the grasp of the cervix uteri. The placenta was found detached, and was removed without difficulty. Very little blood escaped. The placenta was firm and hard, and the uterine surface presented twelve or fifteen small clots embedded in the tissue, varying in size from buckshot to large peas. The first day after confinement was not marked by anything unusual, except a very scanty lochial discharge; but the patient felt very well. April 5, at about eleven A.M., she got up to urinate, and while sitting on the commode suddenly experienced a feeling of numb-

ness in the right forearm and hand. She became very nervous and excited, crying out that "her arm was dead." The hand, after a few minutes, was found cyanosed and cool, and the radial pulse absent. Feeble pulsation was detected in the upper part of the brachial. She was put to bed, the arm and hand were wrapped in cotton and flannel, and an anodyne was administered. She soon slept. In about one hour and a half after the development of the symptoms in the arm, she awoke, when the nurse noticed a thickness of articulation and that the face was drawn to one side. The attendant had not been absent from the room, and she was positive that no convulsion or apoplectic seizure had occurred. The left side of the face was palsied; the tongue protruded to the left. The forehead-muscles and the eyelids were not affected, and the pupils were even and normal; the left upper extremity was quite helpless, while the left leg could be moved slightly. The patient was quiet, and answered questions perfectly, except that the words were not distinctly uttered. She complained of severe neuralgic pain and numbness in the right arm, but made no complaint of headache.

April 6.—The sensation in the left hand and foot was tested, and found to be defective, especially in the hand, the patient not being able to detect two points separated one half-inch on the palmar surface of the finger-tips, and even sometimes mistaking the finger touched. She had suffered much from the pain in the right hand, which was very severe in the thenar eminence. The surface was cool and dusky, the radial pulse still absent. Urine was passed naturally, but was concentrated and quite muddy. It deposited one-eighth albumen. The heart-sounds seemed quite normal. In the evening the temperature rose to 100°; pulse 100.

April 7.—Condition much the same, the fever continuing. Evening temperature 101°; pulse 70 and full. The kidneys were acting better, under the influence of diuretics. She was quite talkative, and rather foolish in her demonstrations of affection, etc., but there was no true delirium. The pain in the right hand continued troublesome.

April 8.—Power of motion in the left leg was slightly greater. Left arm continued quite helpless. Fever continued, with an evening temperature of 100½°; pulse 60. The urine was more plentiful, with the proportion of albumen diminishing. The pain in the right hand was still the most prominent symptom. The bowels, which had been confined, were freely moved by a mercurial cathartic.

A daily record of the symptoms is unnecessary, as the improvement was very gradual, but uninterrupted.

Slight fever of a continued type was noted until April 17, when the temperature became

normal. At about the same time the urine became free from albumen, the deposit having steadily diminished day by day. The improvement, after two weeks, in the paralysis was very slight in the face and arm, but more marked in the leg, which was moved with some freedom. The right hand continued painful for more than a month, and was, indeed, the chief cause of complaint. There were signs of returning circulation through collateral vessels, the radial artery still remaining pulseless, and the hand decidedly cooler than the other.

After two months, the patient was able to walk about, but experienced some difficulty in stepping upward. The left arm could be moved a little at the shoulder and elbow, and some flexion could be made at the fingers. Sensation only slightly defective. Paralysis of face and tongue somewhat better. Right hand continued cool, but with fair circulation, as evidenced by the color and the movement of blood in the superficial veins. No radial pulse. Her general health was very good. There was marked acne rosacea on the nose, cheeks, and forehead. After six months, motion was good in the left leg. Left arm not much wasted. The deltoid muscle was weak, with impaired pronation and supination of the forearm. Power to grasp with the hand better, but still very defective. There is slight permanent contraction of the flexors of the fingers, and to a less degree of the toes also. The palsy of the face-muscles was not noticeable, except when she attempted to use them in laughing or talking. Tongue protruded somewhat to the left. The temperature of the right hand was decidedly below that of the other, and the radial pulse still absent. She no longer suffered, however, from the pain which was at first so annoying. The nails of the right hand showed transverse ridges, marking the period when their nutrition first began to suffer. Above this line the new nail was depressed and flattened. Her health was fair, the tongue clean, and digestion good. The eruption on the face had decidedly improved. Menstruation was regular, and the urine free from albumen. Auscultation revealed nothing abnormal in the heart. The sensation in the palsied hand had much improved, but was still slightly defective.

*Remarks.*—This case is one of great interest, and I have searched medical literature in vain for its counterpart. There is not much doubt that the asthmatic attack, which was the first symptom noticed, was connected with albuminuria. The latter condition, in all probability, was also a predisposing cause of the placental hemorrhages, which disturbed the circulation sufficiently to destroy the life of the foetus. The influence of albuminuria is well understood as a cause of hemorrhage,

although the *rationale* of its action is not very clear. The chief interest in this case, however, has to do with the nature of the hemiplegia. The persistent chronic character of the paralysis will enable us to lay aside such alleged causes as hysteria and anæmia, the effect of which would be mild and transient. Uræmia has been urged as a cause of puerperal paralysis, and Cazeaux says "that Imbert-Gourbeyre feels no hesitation in saying that uræmia is the usual cause." This opinion is not generally held, however, except indirectly as a cause of hemorrhage. The symptoms in this case can only be explained by ascribing them to either hemorrhage or embolism, or possibly thrombosis, in the neighborhood of the right corpus striatum or motor tract. The position of the lesion can be asserted with some certainty, as the paralysis was chiefly of motion, affecting the left upper and left lower extremity, the muscles about the angle of the mouth and the nose, and the tongue on the same side, without materially disturbing the eyes or the forehead.

The sudden occurrence of hemiplegia, without the usual premonitory symptoms of hemorrhage, and without convulsions or apoplectic seizure, would seem to indicate embolism, as would also the age of the patient, hemorrhage of the brain being in the majority of cases a disease of advancing years and diseased blood-vessels. On the other hand, it is well known that the *left* middle cerebral artery is more commonly the seat of embolism than the right. This is readily explained by a reference to the direct origin of the left carotid from the arch of the aorta. For this reason also aphasia is dwelt upon as a symptom of the disease. There was undoubted albuminuria, a condition favorable to hemorrhage. The diagnosis of embolism must generally be considered very doubtful, if the origin of the supposed embolus cannot be demonstrated. Hence the importance of valvular disease of the heart, as the vast majority of the cases reported have had their origin in valvular excrescences or fibrinous deposits in the heart. (I refer to embolism of the systemic arteries, as the disease in the pulmonary artery usually is caused by a clot from phlebitis in the pelvis or extremities.) The case under consideration had no evidence of cardiac disease, and the heart was examined repeatedly and carefully. Although so many of the

characteristics of cerebral embolism were absent, there was one feature that was significant. The undoubted sudden occlusion of the right brachial artery, followed in a short time by equally sudden hemiplegia, indicate an identical cause for both. Of course it would be possible for embolism to occur in the extremity and hemorrhage in the brain; but if the presence of the disease in the arm is admitted, the same lesion in the brain cannot be gainsaid for want of an evident source of the embolus.

That the presence of signs of cardiac disease is not always considered essential to a diagnosis of embolism, I would refer to Dr. A. Hughes Bennett,\* who gives the histories of six cases, in five of which the heart was apparently normal. None of these cases, however, terminated fatally: so that proof is wanting of the healthy condition of the heart. His diagnosis was based upon the chronic character of the hemiplegia, the comparative youth of the patients, absence of premonitory symptoms, and limitation to the motor tract, and the absence of albuminuria, although, as several of these cases were not seen for some time after the inception of the disease, there may have been temporary albuminuria. It seems possible also for a coagulum to form in the heart or aorta without causing auscultatory signs. Thus, Roper† reports a fatal case of embolism of the right heart and pulmonary artery, due to fibrinous concretions, in which the heart-sounds were not affected. The question of primary thrombosis of the arteries at the seat of the lesions in the arm and brain is worthy of consideration; but that is a subject on which we have very little light at present, and there is still much to be investigated of the influence of pregnancy and the puerperal state upon the blood. It is understood, however, that in pregnancy the blood is relatively poor in corpuscles and rich in fibrin,—a condition which is favorable to coagulation. After a careful study of the clinical history of this case, I would venture the opinion that it was one of multiple embolism, in which the emboli were derived from some unknown point in the heart or aorta or one of thrombosis from a hyperinototic state of the blood; that the occlusion took place in

the right middle cerebral artery, and to an extent not sufficient to prevent collateral circulation, the brain-substance in the neighborhood, therefore, escaping in great measure the grave secondary changes which result when the circulation is permanently checked.

Fordyce Barker‡ relates a case in many respects similar. The patient, a primipara, æt. 32, was suddenly seized with left hemiplegia during labor, without loss of consciousness or convulsions. There was also temporary albuminuria and some fever. She slowly recovered, and was able, after some weeks, to walk about, slight contraction remaining at the ankle-joint. Dr. Barker thought that only embolism could explain the symptoms, whereas if convulsions had occurred hemorrhage would have been indicated. Although the condition of the heart is not mentioned, it may be assumed from the history of the case that that was apparently healthy.

In the treatment of this case there was nothing unusual except the use of carbonate of ammonium, as recommended by Bartholow. The embolic arm was carefully protected by being well wrapped in cotton, and morphia was freely used to control the severe pain in the hand. The diet was fluid, and the circulation was relieved by diuretics and cathartics. Quinia and stimulants were used later in the illness. It will be well to remember that the symptoms developed suddenly after the patient had risen from bed, and there is little doubt that the exertion acted as an exciting cause. We should therefore heed the warning, and not allow patients lately confined to leave the bed, although the precaution may be unnecessary in many cases. Who can tell when, as in this case, a few minutes may change a case of apparently normal convalescence from childbirth, into a serious and dangerous disease? It also emphasizes the importance of ascertaining the condition of the kidneys, the function of which is so frequently disordered in pregnancy. An examination of the urine of this case would have given timely warning of danger, which might have prevented a tedious and perhaps incurable affection, to say nothing of the life of the fetus, which was sacrificed on account of the diseased condition of the mother.

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\* Clinical Lecture on Diseases of the Nervous System, *British Medical Journal*, 1881, vol. i. p. 261.

† Transactions of the London Obstetrical Society, vol. xxi. p. 74.

‡ Puerperal Disease, p. 27.

## THE USELESSNESS OF STYPTICS IN GENERAL SURGERY.

*Read before the Philadelphia County Medical Society,  
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BY JOHN B. ROBERTS, M.D.

**I**F hemorrhage is sufficient to make its arrest by surgical means important, styptics are either worthless because inefficient, or needless because better hæmostatic measures are easily applicable. That which is inefficient and unnecessary is certainly useless. Hence styptics are useless for arresting hemorrhages met in general surgical practice.

By styptics I mean those astringent chemical agents that are employed to stop bleeding, because of their tendency to produce contraction of the vessels and surrounding tissues, and because of their effect in inducing rapid coagulation of blood. Their number is great. Subsulphate of iron, perchloride of iron, alum, tannic acid, gallic acid, turpentine, the copper, zinc, and silver salts, and combinations of various mineral and vegetable ingredients, have had their advocates. They are all about equally useless, though some are more objectionable than others.

The method of using styptics generally recommended is substantially as follows: "Remove loose clots, wipe the bleeding surface dry, and press upon the part a piece of cotton, muslin, or sponge impregnated with the styptic powder or solution." In many cases this will, I admit, be followed by cessation of bleeding; but so would mere exposure to the air, or the application of pressure without the styptic solution.

I have three objections to the use of styptics:

1. Their reputation as hæmostatic agents leads practitioners to resort to them when more trustworthy methods are needed. Thus valuable time is lost, for, after temporary arrest, the hemorrhage recurs in the already anæmic patient, and is perhaps followed by disastrous results.

2. If they fail to control the bleeding,—which they generally do if the hemorrhage is important,—it is often so difficult to rid the surface of the pasty clots that subsequent ligation of the vessels is well-nigh impracticable.

3. Many styptics prevent union by first intention, because they irritate the raw surface, lead to inflammation, or induce supuration.

Monse's salt—the subsulphate of iron—has probably more reputation than any other styptic, yet it is the most objectionable of all. It covers the wound with black, sticky clots, which obscure further examination of the surface, prevent primary union, and may even allow bleeding to occur beneath them. I have seen such leathery masses of coagulum raised up into vesicles by the subjacent hemorrhage.

There are but two scientific and satisfactory ways of arresting hemorrhage as usually observed in the practice of general surgery:

1. The first is occlusion of each individual vessel by ligation, torsion, or acupressure, and is generally not required for arteries smaller than the facial, nor for veins, except those of the largest calibre.

2. The second method is direct pressure by compresses and bandages, which, if properly applied, will always be effectual when the first method is not demanded. It is to be adopted when there is oozing from small arteries and capillaries.

In all cases of traumatic hemorrhage, it should be recollected that a man can lose many fluidounces of blood without serious injury, and also that no artery or vein can bleed if it is compressed by the fingers. These facts assure the surgeon that there are always time and means to control the bleeding at least temporarily.

Many arteries that spurt freely when first divided soon spontaneously stop bleeding. Therefore it is foolish to interrupt the steps of an operation by ligating every little vessel that throws out a jet of blood. Let the surgeon proceed, even if the arteries are quite large, and when he has finished his incisions he will find, to his surprise, very few points requiring ligatures. He should ligate these, and, after washing away the loose clots, make moderate and equable pressure. There will then be no part for styptics to play.

It is possible, perhaps, that there may be occasional instances of oozing where pressure cannot be effectually applied; but these are certainly so rare that they do not materially affect the truth of the proposition that styptics are useless. In bleeding from cavities, compressed sponge will often make efficient pressure; and with elastic bandages we can obtain sufficiently firm compression even of soft and flaccid parts. Of course bandages must not be applied tightly enough to strangulate and cause



gangrene. Firm pressure is all that is necessary, for it requires only moderate digital pressure to occlude even the largest arterial trunk.

It would be well if the profession could be made to forget the very existence of styptics, for then every one would treat hemorrhage by the best methods, and the waters of Pagliari, Ruspini, and Brocchieri would deservedly cease to flow, and would soon sink as far from sight as their ancient inventors are buried. When the physician again treats ague with the bark jacket it will be time enough for the surgeon to treat hemorrhage with styptics.

#### THE ADULTERATION AND SUBSTITUTION OF DRUGS AS ELEMENTS OF UNCERTAINTY IN MEDICAL PRACTICE.

*Read before the Philadelphia County Medical Society, December 13, 1882,*

BY HENRY LEFFMANN, M.D.

GENTLEMEN,—My intention in presenting this paper is to place on record in a definite manner the result of some observations as to certain practices of pharmacists and dealers in drugs. Some of the points here given have been presented elsewhere, but not in a satisfactory form. Though the fact that adulteration existed in raw and prepared drugs has been long known, the more striking features of the present communication have been observed but recently. As much misunderstanding and some personal feeling have arisen out of the investigation, I will give a brief and, I believe, correct history of it.

Some time during last summer a gentleman connected with the editorial department of a city newspaper obtained the information that certain druggists in the city were in the habit of making substitutions in prescriptions calling for costly drugs. The informant was a pharmacist who officiated as relief clerk,—that is, served in different stores in place of clerks temporarily absent. In this manner he is said to have become familiar with the practice of seventeen Philadelphia stores. The information thus given of the shortcomings in these places was of a character eminently suited for the local columns of a daily paper, and it was accordingly published, with such adornment as is the custom of the city re-

porter and editor. The original publication of these charges has been ascribed by the pharmaceutical journals to the animus of the Medico-Legal Society of this city, and to the efforts of some younger practitioners of medicine to bring themselves into notice; but neither of these ascriptions is correct. The first articles originated within the management of the paper, and were published without any consultation with professional persons, and with no other motive than that of furnishing news. The articles attracted much attention. The Trade Association of Philadelphia Druggists considered them at one of their meetings, and—unwisely, I think—made a formal denial of the charges, and challenged the newspaper to produce proofs. The editor of the paper then engaged me to assist in the investigation, and, under my direction, prescriptions were written and medicines purchased. At a subsequent meeting of the Trade Association one of the members is reported as having alluded disparagingly to this method of "decoy" prescriptions; but I cannot see that any reasonable objection can be made to it. No honest druggist need fear a decoy prescription, and it is certainly one of the few methods by which dishonesty can be detected. The prescriptions and medicines obtained exhibited a rather alarming degree of incorrectness and fraud.

In addition to the results of this investigation I have learned much recently from the published reports of examination in other cities, and from conversation with manufacturing and retail druggists.

The abuses in question may be considered under three heads,—inferiority in the crude material; deficiency in quality or quantity of the articles used in prescriptions; direct substitution.

Every one is aware of the liability of powdered articles to adulteration, but few, perhaps, are aware how poor many powdered drugs are. I lately heard a gentleman who has had several years' experience in the wholesale trade say that in most cases the so-called *fresh* drugs were four or five years old. He detailed a case in which a quantity of a medicinal root, which had become so worm-eaten as to be unfit for sale in the whole condition, was ground up, and the powder was found to be of such unexpectedly light color that it was marked A 1,—that is, first-class,—and was sold as such. I have no doubt that this instance is

but one of many similar occurrences in the wholesale drug-stores of this and other cities. The question, however, of the condition of crude articles belongs more to pharmacy than to medicine, and I pass it by.

The pharmaceutical preparations, tinctures, extracts, etc., made with inferior grades of crude materials will of course be inferior in character; but a more serious fraud exists in the practice of intentionally weakening preparations by the addition of diluents. Among the substances that are thus tampered with is laudanum. A feeling prevails among pharmacists that it is entirely proper to sell over the counter to general purchasers a tincture of opium from ten to fifty per cent. weaker than the official article. This custom is not limited to retailers: wholesale houses of reputation furnish a diluted article for the trade. The excuse for this practice is that persons who buy laudanum may be injured by it, and that dilution will render it less dangerous. I regard this as a mere pretext, not in any sense expressing the proper motive. The real reason is that laudanum is expensive, and that its strength may vary greatly without inexperienced persons suspecting it. The object is, therefore, to increase the profit. The new Pharmacopœia has increased the strength about fifty per cent., and we may expect to see laudanum sold even more adulterated than heretofore. Sweet spirit of nitre, paregoric, and tincture of iodine are also weakened. My examinations show much variation in quality in these preparations as obtained at different stores. Tincture of iodine may be prepared at a cost of about four cents per ounce, and, as it retails at prices not less than ten cents an ounce, the margin of profit may be supposed to be sufficiently large to insure a perfect quality. Not very highly skilled labor is needed, for the process in the old Pharmacopœia is as follows:

"Take of iodine one ounce, alcohol one ounce; dissolve the iodine in the alcohol."

A form of fraud probably very common, but often not to be detected without elaborate analysis, is the improper preparation of ready-made pills. Rumors of deficiency in even standard brands are occasionally heard; but I did not know of definite statements on this point until the publication recently of a report on adulteration in the State of New York. According to

this, twenty-nine samples of quinine pills were examined, and in every case the amount of quinine sulphate was below that which the pill professed to contain. Two-grain pills were found to contain from 0.9 to 1.8 grains; three-grain pills contained from 1.7 to 2.8 grains; while five-grain pills contained from 2.4 to 4.7 grains.

Not only may the active ingredient of the pill be deficient in quantity, but it may also be deficient in quality or condition. Not much attention has been given to this matter by investigators. During the summer one of the members of the present class at Jefferson College has, under my supervision, made an examination of the standard pills, with a view to determine the quality and condition of the drugs contained in them. The result of these examinations is that substances are often put into pills in a crude condition; articles—such as arsenic or calomel—which should be in fine powder are often in coarse grains. Incidentally I may mention that some homœopathic triturations were examined, and found to be open to the same criticism.

Substitution of one drug by cheaper articles of analogous character is another fraud, and one which is more common than is generally supposed. From the results of analyses, and from facts detailed to me by druggists, I am forced to the conclusion that in more than one drug-store in this city it is a regular practice to substitute, partly or wholly, the cheaper alkaloids of bark for quinia. I have been told by well-informed druggists of one store where it is believed no quinia is kept on hand; of two other stores where the standing rule was to use quinia and cinchonidia in equal parts. I present a preparation as put up in an up-town store, in which no quinia was used, although the prescription called for four drachms of it.

Boric acid would seem to be too cheap and too distinct a body to allow of substitution; but a druggist in the northeast section of the city on two occasions put up borax instead,—in one case furnishing it in a moist condition, in the other as a dry powder mixed with tannin. I submit for the inspection of the members a sample of the latter.

Another case of substitution was that of eserine sulphate for eserine bromide.

In conclusion, I think these facts go to show that the time is approaching when

regular practitioners will have to take more direct control over the condition of the medicines which they use. I have been for some time in favor of physicians dispensing their own medicines, believing that such a system will have many advantages, both to the profession and to the public. As this reform, however, will be of so radical a character that we cannot expect immediate agreement upon it, I think that it may be admitted that we ought to discourage all kinds of ready-made prescriptions, whether they present themselves under fanciful modifications of scientific terms or in the plainer form of bitters, prepared foods, compound syrups, etc. With the resources of modern pharmacy for concentrating drugs and concealing disagreeable taste, I think no necessity exists for encouraging the wholesale manufacture of pills and granules, which may lie for months or years in the store, becoming more or less insoluble and inert. The profits of the drug-trade are in all cases large enough to allow the best service by the apothecary; and when quinine, morphia, or similar article is to be given in pill form, no reason exists why the pill should not be made up by the prescription-clerk.

#### PELLETIERINE TANNATE AS A VERMIFUGE.

BY A. JUDSON GRAY, M.D.

MY first experience with pelletierine tannate as a tæniafuge has been so satisfactory that I desire to communicate the facts in the case for the benefit of those who, like myself, may have had failures with the older methods of treatment.

After reading the article by Dr. Berenger-Feraud, an abridged translation of which was published in the *Times* for October 7, 1882, I procured a single dose,—one fluidounce of the solution,—at a cost of three dollars, from the American agents, Messrs. E. Fougere & Co., of New York.

The subject of my experiment was a strong, well-nourished man, 35 years of age, of good constitution and strictly temperate habits. He first saw evidences of the presence of a tape-worm five years ago. He had been subjected to four attempts to expel the parasite previous to the one of which I am speaking. The first was with turpentine, which, to use his own expression, "nearly killed him, but did not ma-

terially damage the worm," as only a few distal joints came away. The next three efforts were with pumpkin-seed, resulting in the passage of eight, twenty, and eighteen feet respectively, including a large part of the neck; but in neither instance was the head seen, nor is it probable that it passed away, for after a period varying from two to three months the offspring (not joints) of the worm were again seen. My patient selected November 19 for the trial of pelletierine, and on the evening before took a light supper of bread and milk, and at bedtime used a large enema of warm water. On rising at nine o'clock the next morning, the full dose of the tæniafuge was taken in a glass of sweetened water, followed in a quarter of an hour by six of Wyeth's compound vegetable cathartic pills. An hour later a substantial breakfast was taken, and enjoyed as usual. At one o'clock P.M. occurred a single evacuation of the bowels over a vessel half full of warm water. The action was free and painless, and brought the worm much knotted and rolled upon itself, but *entire*. It was of the unarmed species, and measured twenty-four feet and six inches. Pelletierine was found to be agreeable to take, and caused neither nausea, giddiness, nor other unpleasant symptom. Half an hour after taking it there was experienced for a few minutes slight exhilaration and a sensation of extreme lightness, the patient remarking that "he felt as if he weighed about three pounds." The whole process was simple, easy, and entirely satisfactory.

A large number of persons, of both sexes, all classes, and all ages, residing on our Western plains, are afflicted with tape-worm. My experience with the several methods of treatment coincides very nearly with that given by Dr. Berenger-Feraud, koosso alone having invariably given negative results, possibly because the samples used were inert. I have seen pumpkin-seed entirely successful in expelling the armed worm, but with the other species it is of doubtful utility, although, as Dr. Squibb says in No. 6 of his *Ephemeris*, the efficiency of this and all other means employed may depend to a great degree upon the position of the head of the worm.

I have before in this paper alluded to the *offspring* of the tape-worm. They are important because they are the first unmistakable indication of the presence of a worm in the intestines. Many writers

allude to them as "joints," which is incorrect and misleading. The joints are dead when passed, while these offspring are very much alive, and will continue to move for many hours under favorable conditions. A perfect description of them may be found in Aitken's "Practice," and nowhere else within my knowledge. I have been able completely to verify Aitken's observations, and, furthermore, in several instances have seen these offspring in various stages of development attached to the segments of the parent worm.

### A CASE OF RHEUMATIC TONSILLITIS.

BY G. E. DE SCHWEINITZ, M.D.

THE subject of the following sketch is one taken from the practice of Dr. W. A. Edwards, of this city, for whom I saw the patient a number of times, and by whose courteous permission I report the case.

M. B., aged 22, a large-framed Irish girl, of full, plethoric habit, after some exposure to cold and wet on Tuesday, December 26, 1882, began to complain, during the night, of a slight sore throat, and by the end of the following day had developed the symptoms of an ordinary pharyngitis. No improvement having taken place, on Thursday, the 28th, she began gargling her throat with a mixture of flowers of sulphur and water, which treatment was followed by no benefit to herself, but rather by an aggravation of the symptoms, and the appearance of a "rash," which rapidly spread over the body. Thinking she had developed scarlet fever, her friends, much alarmed, hurriedly summoned a physician living in the neighborhood, who quieted their fears, pronounced the malady non-contagious, and prescribed some simple febrifuge mixture. Thus much of the account I gleaned from her friends. As her symptoms steadily grew more aggravated, Dr. Edwards was sent for on Saturday night, and found the patient in the following condition. Her tonsils were enormously swollen, at least as far as could be determined by external palpation, inability on the part of the patient to open the mouth to any extent forbidding ocular inspection. A bright red erythematous blush covered almost the entire surface of the body, but was especially well marked upon the face, neck, and chest. The tongue, as far as could be seen, was swollen and covered with a thick brownish fur. The pulse was quick and irritable, the temperature 102° F., the respirations somewhat embarrassed, and cerebration slightly disturbed. All endeavors to reach

the swollen tonsils with his finger having proved futile, Dr. Edwards prescribed the external application of counter-irritation, together with a resolvent ointment, and internally a mercurial purge, to be followed by a saline, intending to see the patient in the morning and continue any treatment which a further development of the symptoms indicated. Unfortunately, he was unable to attend to any professional business on the following day, and requested me to see the case and take charge until he could again visit her. Accordingly, on Sunday morning I saw the patient, and found her presenting all the symptoms just detailed, in a much more aggravated degree, except that the erythematous flush had wellnigh disappeared, a few traces only remaining on the neck and chest. The jaw was now set almost as firmly as in a case of trismus, it being possible only to force between the teeth the blades of a pair of scissors. The tongue was of a dirty-brown color, the pulse much excited, the temperature had risen to 104° F., and the disturbed intellection had deepened into delirium. In addition, the following new symptoms had developed themselves: pain in the deeper layers of the post-cervical muscles, increased by pressure and movement, tenderness with some slight swelling and redness of the left wrist-joint, and an intensely acid, sour-smelling sweat, which had been quite profuse during the previous night. These symptoms certainly justified the diagnosis of rheumatic tonsillitis, and accordingly ten grains of salicylate of soda every three hours were prescribed, together with an envelopment of the swollen joint in cotton batting and the continuance of the resolvent ointment. Thirty-six hours later, when the patient was again seen, a decided amelioration of every symptom had taken place; the pain in the back of the neck and joint had passed away, the tongue was moist and beginning to clean on the edges, the jaws could be opened with a fair degree of freedom, and the temperature had fallen almost to normal. She continued to improve, and at the end of two days was convalescing, when she imprudently left her room, insufficiently clad, and exposed herself to the cold air. That night her temperature again rose, and there was developed an ordinary case of slight rheumatic fever, several of the middle-sized joints being involved. A salicylate-of-soda treatment was again instituted, and under its use the patient made a speedy recovery. This relapse was unfortunate for the girl, but certainly was very interesting, confirming, it seems to me, the diagnosis of rheumatic tonsillitis.

The prevalence at this season of the year of all manner of throat-troubles is perhaps sufficient excuse for reporting a case of this nature; but, furthermore, if in these cases the inflammation of the tonsils is an invasion-symptom or the prodrome of an at-



tack of rheumatic fever in the near future, and it be recognized as such, appropriate treatment, it seems to me, might ameliorate, if not absolutely prevent, a general attack of rheumatism. Certainly, any case of tonsillitis accompanied by unusually severe constitutional disturbance, pronounced post-cervical pain, and acid sweating, especially if any one of the middle-sized joints exhibited slight swelling and tenderness, should be viewed with suspicion and a rheumatic origin suspected. The rather extensive rash or redness of the skin can naturally be classed among the so-called symptomatic erythemas which occur in the course of certain systemic diseases; but it is interesting to note that this erythema followed the use of sulphur, and, if the statements of her friends are trustworthy, grew worse after each employment of the sulphur gargle. I know of no recorded instances in which sulphur has produced such an eruption by its internal administration or when used locally on the fauces, although, as is well known, its external application as a parasiticide or otherwise may be followed by an eczematous inflammation; but, at the same time, I know no reason why it should not produce such results, explicable, if by no other cause, at least by an idiosyncrasy on the part of the individual.

1330 SPRUCE STREET, PHILADELPHIA.

### URÆMIC PSYCHOSIS.

BY EDWARD T. BRUEN, M.D.,

Demonstrator of Clinical Medicine in the University of Pennsylvania.

IN the *Deutsche Medizinisch-Zeitung* of August 3, 1882, occurs an account of severe psychic disturbance complicating a uræmic attack in a case of chronic renal disease. The record appeared as a translation in the *Philadelphia Medical and Surgical Reporter* for November 4, 1882. A similar case came under my notice recently in the wards of the Philadelphia Hospital, and, as psychic disturbances during or following uræmic attacks are exceptionally interesting, the following case merits a brief notice.

The patient was a man, between 40 and 50 years of age. A physical examination coupled with his personal history established the diagnosis of interstitial nephritis of at least five years' standing. There was but slight dropsy,

amounting to a moderate swelling in the eyelids and ankles. The characteristic cardiac and arterial lesions were moderately well marked. After a week's residence in the hospital under appropriate treatment, and during which time the symptoms were those commonly found in such cases, and without psychical disturbance, suddenly one morning, on waking, the patient appeared much confused. Within a few hours a state of intense excitement ensued, attended with wild hallucinations. The skin was bathed in sweat, the pupils immovable, neither dilated nor contracted; the pulse was slow, the respiration deep and only ten per minute. At times the mental state approached coma, but the psychical disturbances very soon returned. The urine was withdrawn by catheter, and was found of a dark-red color, very full of albumen. The above symptoms lasted three days. On the third, consciousness gradually returned, and reason asserted itself, but there was no recognition by the patient that anything unusual had happened. After the attack, the presence of albumen continued gradually lessening, and the patient left the hospital so far convalescent that his symptoms were those of a latent interstitial nephritis with albuminuria.

Naturally the question of diagnosis was most pressing, and—need I say?—most difficult. Alcoholism was negated by the history of the case, as was also specific meningeal disease or the so-called cerebral rheumatism. The evidences of renal disease drawn from examination of the urine, the study of the heart, which was hypertrophied, the arterial system, which gave evidence of increased arterial tension through the pulse and accentuated second sound, all tended to support the uræmic genesis of the psychic disturbances. The especial symptom meriting our comment is the restlessness of the patient. It was the active delirium of typhus, or tendency thereto, rather than the coma, which made this case unique in the records of uræmia. The treatment pursued was commonplace,—cupping, wet and dry, over the lumbar region, the administration of purgatives, and the use of the fluid extract of *jaborandi* until free diaphoresis was secured. The use of *jaborandi* was not considered to be contra-indicated by the general sweating which accompanied the attack. *Jaborandi* probably stimulates the secretion of the skin by acting directly on the sweat-glands or the nerves presiding over their secretion. In this case the sweating prior to the use of *jaborandi* presumably came from the repletion of the cutaneous vessels. It therefore

was a transudation, and could not liberate the products of retrograde tissue-change as positively as the sweating induced by the diaphoretic. This detailed allusion is important, because so many cases of uræmia occur when the skin is moist, although the usual description of a dry skin is the rule. The purging was undoubtedly a powerful element of the treatment, but, as observed at the outset, the interest nucleated itself around the diagnosis.

## NOTES OF HOSPITAL PRACTICE.

### PENNSYLVANIA HOSPITAL.

*CLINIC OF JAMES H. HUTCHINSON, M.D., ONE OF THE ATTENDING PHYSICIANS TO THE HOSPITAL, PHYSICIAN TO THE CHILDREN'S HOSPITAL, PHILADELPHIA, ETC., NOVEMBER 29, 1882.*

Reported by WILLIAM H. MORRISON, M.D.

#### ENDO-PERICARDITIS.

**G**ENTLEMEN,—The first case which I shall bring before you to-day is one which has been in the hospital for some time.

Her history is as follows. "S. G., aged 22, a single woman, a domestic by occupation, was admitted on the 6th of the present month. She came to this country one year ago. Her previous history was good. She had had whooping-cough and measles. The menses began at fifteen, and have been regular since. She has been working at Mount Airy for some time. About the middle of last August she became overheated, and took cold. This was accompanied by pain in the abdomen, and headache. In a few days she had pain in the left side, extending into the arm. An eruption, resembling that of measles, came out over the face and body. She also had pain in the neck and difficulty in swallowing. About September 4 she first noticed dyspnoea and palpitation on exertion. She has gasping-spells at times. The menses were regular until the last time, when they were delayed two weeks. She has soreness across the chest, which is worse at night. The bowels are regular. She was compelled to give up work two weeks ago. On admission, the pain in the abdomen was not excessive. The temperature was 100°.

"November 16.—Complained of pain in the region of the heart. On auscultation there was heard a harsh systolic murmur, most distinct at the apex. The area of

dulness was increased, especially in a longitudinal direction. She was ordered Basham's mixture, in doses of one-half an ounce, three times a day.

"November 20.—The pain and dulness seem to be diminished; the murmur is not so harsh, and is less distinct.

"November 27.—Still complains of pain in the præcordial region. The area of dulness is increased, and somewhat pyramidal in shape."

This is the history as we have been able to obtain it. The range of temperature you can see from these charts. As you perceive, it is similar to that of the young woman whom I showed you a short time ago, and in whom I diagnosed incipient phthisis. During the first two weeks it varied between 99° and 100°; later, the remissions have been greater, the morning temperature being from a degree to a degree and a half lower than the evening temperature. This morning the temperature is 2° above the normal. There is, then, a moderate amount of fever.

There was nothing in this patient's condition when admitted that, without a careful physical examination, would have led us to the real source of her trouble. The history which we then obtained was much less complete than that which you have heard read. It is often difficult to obtain a perfect history of the commencement of a disease, even when the patient desires to give the information. It is often necessary to question the patient repeatedly and ask the same question over and over, in different forms, in order to get at the real facts of the case. We have made up this history from the answers we have received on different occasions.

At first, the symptoms pointed towards typhoid fever; there was a little abdominal pain, headache, a little tendency to diarrhoea, and considerable prostration, but immediately after admission this diagnosis was found to be not tenable; the other symptoms of typhoid fever were not present, and symptoms which are not usual in typhoid fever presented themselves.

We therefore pursued the investigation still further. There had been at that time no symptoms pointing to the chest as the seat of the trouble, but on examining the chest I found a well-marked systolic murmur at the apex of the heart. This murmur was not purely blowing, but was rough and rasping in character. Percussion showed

that the area of cardiac dulness was increased; it was increased in all its dimensions, but especially from above downwards. There was dulness from the second interspace on the left side downwards. At this time no apex-beat could be felt. The area of dulness was distinctly pyramidal in shape. This pyriform shape of the cardiac dulness in certain diseases is very important in diagnosis. I listened carefully to see if I could detect any friction-sound, but could hear none. I have examined her repeatedly since then, and at times have thought that the blowing murmur due to mitral regurgitation was somewhat rougher in the positions in which we should expect to find a friction-sound. I therefore think it not unlikely that this was due to slight friction; but this has never been positively established. Finding these physical signs, I of course had no difficulty in diagnosing endo-pericarditis,—that is, inflammation of the endocardium complicated by inflammation of the pericardium. The blowing murmur due to mitral regurgitation, which was caused by insufficiency of the valve, indicated the endocardial affection, while the pyriform dulness over the heart pointed to the pericardial trouble. The question might of course be asked, Did not this murmur indicate an old endocarditis? But we do not find that the history of cardiac disease is so distinct as to warrant this assumption. It is more probable that the endocarditis and pericarditis both occurred at the same time.

In regard to the cause of this disease it is very rare to have these affections occur idiopathically. Occasionally they do occur without obvious cause. They frequently come on in the rheumatic diathesis, and also in the later stages of kidney-disease, especially when it is of the cirrhotic form. They may, of course, result from traumatism, as from wounds in the region of the pericardium, or penetrating it, or from blows over the heart. At first sight there seemed to be no cause for this endo-pericarditis. Upon questioning her closely, however, I found that she had suffered from pains in different joints. These pains do not seem to have been severe, but they appear to have been characteristic of rheumatism. I therefore have no doubt that this endo-pericarditis has occurred in a rheumatic person. It is often impossible to make this connection out.

I recollect attending last year a case in my colleague's ward during his temporary absence from the city. The patient had double pleurisy and pericarditis, which seemed to be idiopathic. Some time later, however, when he had passed again under the care of my colleague, he had a well-marked attack of rheumatism. The pericarditis had simply preceded the other manifestations of the disease. I look upon this case as of that character.

As to the treatment of such cases, if I had seen her earlier I should probably have treated her precisely as a case of rheumatism. If I had a patient with well-marked endo-pericarditis and high fever, I should give salicylic acid or salicylate of soda in large doses; but the time for this had passed when the patient was brought to the hospital. The temperature has never been excessive; it has never been above 100.2°. The amount of the pericardial effusion seemed to require that some means should be taken to reduce it. I gave for this purpose Basham's mixture. This preparation you will find useful in many different conditions. It is both a tonic and a diuretic. It was given in the present case in doses of one-half ounce three or four times a day, but it may be given in much larger amounts. It consists, as you are probably aware, of the tincture of chloride of iron, dilute acetic acid, and spirit of Mindererus. The following proportions may be used:

R Tincturæ ferri chloridi,  
Acidi acetic dil., aa f3j;  
Liquor. ammonii acetatis, q. s. ut  
ft. f3vj. M.

Signa.—Dose, a tablespoonful every two or three hours.

The iron and dilute acetic acid may be increased to a drachm and a half in the six ounces, and if you wish to make it more pleasant to the taste you may add curaçoa cordial, or syrup of ginger, or something of that kind.

There was no occasion for digitalis in this patient. Usually there is excessive action of the heart. Under such circumstances the tincture—or, perhaps better, the infusion—of digitalis answers a good purpose. The pulse in this patient has varied between 70 and 80 per minute, and sometimes it has been as low as 68.

I need not tell you that the amount of effusion did not warrant surgical interference. It would have been bad surgery to

have attempted the withdrawal of the small quantity of fluid here present. The operation of tapping the pericardium, while of great service in some cases, is one that should be used only when other means have failed.

In regard to the prognosis, it is favorable as far as the life of the patient is concerned. There is no question, I think, that this patient will recover a certain degree of health; but I do not think she will ever be the same as before the occurrence of the cardiac trouble. There is a certain amount of insufficiency of the mitral valve which will probably be permanent, and a certain amount of roughening will remain. The patient will recover with a damaged organ, but by exercising care she may be able to lead a useful life.

*PARALYSIS, PROBABLY OF AN HYSTERICAL NATURE.*

This patient has been in the hospital for a short time only, and I have not yet arrived at a positive conclusion as to the nature of the paralysis from which she is suffering.

This is the history. "S. L., aged 22, has always had good health until ten months ago, when, during a fit of anger, she suddenly became unconscious at the moment of seizure. Her face became discolored, and there were convulsive movements on the left side. She has only a partial recollection of the following three weeks, but has been told that she was stupid during that time. At first the whole left side lost power, but sensation has not, to her knowledge, been impaired. For some weeks the sight of the left eye was impaired, but now she is aware of no difference in the sight of the two eyes. Ten weeks after the seizure, she gave birth to a healthy full-grown foetus. After the confinement the patient began to improve more rapidly. On admission, the patient was unable to wink the left eye alone; otherwise the face is not affected. Vision is the same in both eyes. The movements of the left shoulder are not impaired; those of the arm are slightly affected. At the elbow flexion and supination can be performed with less power than on the other side, and extension and supination cannot be made to the full extent. The flexors of the wrist and fingers are also affected. There is a slight amount of power in the extensors of the wrist, but the extensors of the fingers are almost completely

paralyzed and contracted. The ability to make all these movements of the arm is variable. The lower extremities are not affected. Sensation is nowhere impaired. Examination of the urine gives negative results. The first sound of the heart is somewhat impaired, but there is no actual murmur."

She is, as you see, rather delicate and not well nourished. You observe the condition of the left hand. The fingers are clawed; she is unable to extend them, and when I attempt to straighten them I meet with considerable resistance. There is some contraction of the flexors of the fingers, and there appears to be slight contraction of the flexors of the wrist. When the hand is flexed, the fingers can be extended with less difficulty. This observation is often made in cases of organic disease. She says that she has no power to open the hand. She states that at first the same condition of flexion and paralysis was present in the lower extremities, but this has entirely disappeared.

These unusual symptoms came on, according to her account, during a fit of anger, and were attended by convulsive movements. The attack may have been due to a slight effusion of blood into some portion of the brain, as, for instance, the optic thalamus; or it may denote some hysterical condition. If it were due to hysteria, we should hardly expect so much contraction as is here present: at the same time, you see that there is a certain amount of paralysis of the face. This, she tells us, was much more developed at the time of the seizure. She was then not able to move the face at all, and the tongue was protruded to the left side. There is still a certain amount of paralysis of the orbicularis on the left side. I find it difficult to say to which of the two conditions that I have mentioned the trouble is due. I find, upon watching the patient, that there is a little more movement than she is willing to admit. I thought yesterday that the paralysis was not so great; but when I spoke of it to the resident she suddenly lost power. This is in favor of hysteria.

It is impossible to say at present which condition is the real cause. I shall have her carefully watched. Whatever may be the condition present, I think that she demands a tonic. I shall place her upon the use of iron in large doses, probably in the form of the carbonate, commonly called



Vallet's mass, five grains three or four times a day. In view of the fact that there may possibly be a slight hemorrhage into the brain, I think it will be better to give her also iodide of potassium, in ten-grain doses, three times a day.

*CIRRHOSIS OF THE KIDNEY.*

This patient is a very interesting one in many respects. Her history reads as follows. "E. S., aged 52; admitted to the house on October 24. Was an inmate of the hospital fifteen years ago, suffering from suppurative pleurisy of the right side. She was tapped, and the discharge continued for three weeks. Five years ago she contracted articular rheumatism, which was followed by cardiac symptoms lasting for two years. She has not menstruated for five years. Three years ago she had a miscarriage: she is sure of this. The child-bearing period has, then, been continued longer than usual. Altogether, she has had three miscarriages. She has one child living and healthy, aged five years, who was also born after the usual menstrual period had passed. On admission, she was weak, hardly able to walk; the tongue was furred; she had pain in the epigastrium, some tympanites; lungs healthy. The heart was enlarged: the apex-beat is felt in the seventh intercostal space, the second sound is accentuated and best heard over the aortic cartilage. The urine contains considerable albumen, and is increased in amount. She has but little control over the bladder.

I shall now show you that the urine contains albumen. As you observe, it is light in color and has a tendency to throw down a slight deposit. This may be mucus or phosphates. It is difficult to say, from the appearance, upon what this depends. To a small quantity of urine in the test-tube I add, carefully, nitric acid, and at once there is the characteristic precipitate due to the presence of albumen. This appears at the junction of the two liquids, and has a sharply-cut border, both above and below. Nitric acid may also throw down a precipitate of uric acid. This occurs above the junction of the two liquids, and its borders are not sharply defined, especially the upper border. This test is not sufficient of itself. We therefore boil the urine, and at once obtain a precipitate, which occupies about one-fourth of the bulk of the liquid. By itself this last test is not reliable, for it may throw down the phosphates; but when

we obtain a precipitate both by heat and by nitric acid the presumption is that it is due to albumen. The examination of the urine is not complete unless we test for more than albumen. It should be tested for sugar, although there is no probability that it will be found in the present case. The specific gravity should be taken, to see what kind of work the kidney is doing; and its reaction should be observed. It is also necessary to examine it microscopically. There are certain bodies seen under the microscope which will give important indications of kidney-disease. I refer, of course, to tube-casts. This urine has been examined repeatedly, but we have not been able to find any well-marked casts. This is not uncommon where a large amount of urine is passed. For the examination for casts it should be specially treated: it should be placed in a conical glass of some size and allowed to settle. It is not often that we are unable to find these casts in cases of well-marked kidney-disease.

As I have stated, this patient had, fifteen years ago, suppurative pleuritis,—that is, empyema,—which required tapping. She recovered, however, quite rapidly. There is some impairment of resonance on the right side, and some harshness of respiration, and some evidence that the lung has not fully expanded, but there is no apparent falling in of the side. I allude to this because the suppurative disease may possibly have had something to do with the kidney-disease. In certain forms of kidney-disease known as albuminoid or amyloid degeneration of the kidney, we generally find a history of suppurative disease of some kind. In this woman the suppuration does not seem to have been excessive, nor do the kidney-symptoms seem to have appeared soon after the empyema. I am inclined to think that the renal trouble has little, if any, connection with the previous disease. In addition, the condition of the patient, her advanced age, the great amount of water that is passed, and the absence of dropsy of the extremities, except when the patient is in an erect position, point to cirrhosis of the kidney. Cirrhosis is due to an excessive development of the connective tissue, which eventually causes contraction of the organ and impairment of function. This disease is indicated by the large amount of urine containing albumen, and by the absence of tube-casts. It is also indicated by

the condition of the heart, which is slightly hypertrophied, and by the condition of the radial arteries, which have unquestionably undergone atheromatous degeneration. The accentuation of the second sound of the heart is also frequently present in cirrhosis. Under these circumstances I think the diagnosis of cirrhosis of the kidney is the correct one. It is possible that there is with the cirrhosis some fatty degeneration; but if this were so we should expect to find some fatty casts.

The treatment demands attention. Here, as in the previous case, Basham's mixture will be a useful prescription. We need a diuretic and a tonic. I shall therefore place her on Basham's mixture, in doses of half an ounce three times a day. It is of course necessary that the general health be maintained: she will therefore be ordered a nutritious diet. Her anæmia and great prostration would seem to indicate a nutrient. Cod-liver oil, if she could bear it, would be of service; but, on account of the irritability of her stomach, I am afraid that she could not retain it, and that it would do more harm than good. I have ordered a moderate amount of stimulant, and, as the kidneys are affected, I give it in the form of gin.

*OBSCURE ABDOMINAL TUMOR, PROBABLY A FLOATING KIDNEY.*

The next case is unusual on account of the age of the patient in whom the trouble occurs. She is stated to be 85 years old, but does not present the appearance of being so old. She was transferred to me as a case of cancer of the stomach. There is unquestionably a tumor in the epigastric region, but from very careful examinations I have not been able to satisfy myself that this is really the condition present.

I shall read her history. "L. P., born in Brooklyn. Family history, negative; had ague twenty-five years ago; had neuralgia in the head before the war. Twenty-two years ago the feet were frost-bitten and required amputation. Has had nightly micturition on one or two occasions since childhood: the urine is heavy and offensive, and sometimes scalding. Last winter she had a cough, but no vomiting. Has had headache for several years. The bowels were regular until last Christmas. She has had dyspnoea and nausea at intervals for a year. On admission, she had pain over the region of the kidneys at times, but not

at present. There is a loud, harsh systolic murmur heard at the apex of the heart. A tumor is felt in the epigastrium to the left of the median line; it is roughly circular in shape and about one and a half inches in diameter; tender on pressure. There is some impulse in the tumor. The treatment consisted in the administration of

Morphiæ sulphatis, gr.  $\frac{1}{4}$ ;  
Spiritus chloroformi, ℥ijss;  
Tincturæ cardamomi, f3j.

Given every two hours.

"October 22.—No vomiting for three days. No pain upon pressure.

"November 1.—She was transferred to me.

"November 5.—Purged with pulv. jalapæ comp. Large fecal accumulations.

"November 6.—The tumor was found situated under the arch of the ribs, about midway between the umbilicus and the ensiform cartilage. It descends with the diaphragm. There is transmitted impulse. It is somewhat painful on pressure. No murmur on auscultation.

"November 9.—No tumor can be distinctly felt in any position.

"November 10.—Tumor lower and more distinct.

"November 11.—A large offensive stool, very black in color.

"November 13.—Tumor larger and lower down in the line of the colon, and perfectly movable.

"November 14.—No stool; ordered more jalap. Tumor tender at one spot.

"November 15.—Large bowel-movement.

"November 16.—Tumor movable and distinct.

"November 17.—Tumor examined under ether.

"November 18.—Percussion over the region of the kidneys gives dulness on the left side and high-pitched resonance on the right side.

"November 20.—Ordered an injection. Had free bowel-movements and vomiting at the same time.

"November 27.—Same treatment and result.

"November 28.—No tumor can be felt. Percussion over the renal regions gives the same result as was previously obtained."

There are several embarrassing circumstances connected with this case. After she came under my care there was very

little vomiting. This appears to have been a prominent symptom before admission, and led to the diagnosis of cancer of the stomach. The tumor, as I have already mentioned, was found under the arch of the ribs, midway between the umbilicus and the ensiform cartilage. But it is found in different positions at different examinations. It is exceedingly movable. Indeed, it is so movable that it seems to me almost impossible to explain it on the supposition of cancer of the stomach. As the tumor is now placed, there is distinct transmission of impulse to it from the aorta. The impulse is simply transmitted from the vessel beneath; there is no expansile movement to the mass. When it is not lying in this position there is but little impulse, and sometimes it is not apparent. Placing the stethoscope over the tumor while in this position, I hear a systolic murmur, due to pressure of the mass upon the aorta. I can increase the harshness of this murmur by making greater pressure.

As I have stated, I have been somewhat puzzled to decide as to the exact character of this tumor. I think that it is too movable, and is not accompanied by sufficient vomiting, to make the diagnosis of cancer of the stomach at all probable. She has vomited but twice during the past month, and on at least one of these occasions the vomiting was due to the purgative taken. I at first thought that it might be connected with the left lobe of the liver, but this was found not to be the case as soon as I saw that it could be moved so freely. On several occasions I have given her purgatives in large doses. These have produced large stools containing many fecal masses which had evidently been retained in the colon for some time. The question therefore arises, Could not this tumor be due to fecal accumulation? Although this condition often gives rise to the symptoms of tumor, I do not think that it is the cause of them in the present case. The very movability is against it; and I have found that after large purgative doses the tumor, instead of being lower down, is often farther to the right. It also persists after the action of the purgative. It is occasionally a little tender, and it is very hard. I can make no impression on it with my finger, which we are always able to do in the case of fecal tumors. Consequently, I think that we must dismiss from consideration the diagnosis of fecal accumulation.

It might be an omental tumor. These tumors are often quite movable. But, owing to the advanced age of the patient, and to the absence of any marked prostration, I am not disposed to accept this as the correct diagnosis.

One of the gentlemen who were examining this mass suggested that it might be a floating kidney. Turning the patient upon her face, we percussed over the region of the kidneys, and we found that, while on the left side there was dullness, there was resonance on the other. It is, therefore, possible that this is a floating kidney. I think that this is probably the correct diagnosis: at the same time, I am not able to make it positively. In those cases of floating kidney which I have seen, I have been able, to a certain extent at least, to trace the outlines of the kidney, and in some instances feel the hilus of the organ. This mass is not exactly of the form of the kidney. I have not been able to distinguish the hilus, and it seems to have a nodulated surface. But, taking all the circumstances into consideration, I incline to the diagnosis of movable kidney. As the patient will probably remain in the hospital for some time, you will perhaps have another opportunity of seeing her.

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## TRANSLATIONS.

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TRANSMISSION OF VIRULENT DISEASES FROM THE MOTHER TO THE FÆTUS.—The experiments of MM. Strauss and Chamberland (*Transactions de la Société de Biologie, Paris*) promise to be of considerable value. As our intimate knowledge of human pathogenesis must generally be the result of analogy, and only receive its substantiation from occasional clinical opportunities, these experimenters have commenced their researches on the lower animals. The report of the first series details the question of the transmission of those diseases the cause of which has been proved to be a microbe or bacteride.

They find that in anthrax neither the tissues nor blood of the fœtus nor the amniotic fluid contain any trace of the bacteria. The passage of the bacillus through the placenta cannot take place at any time of the pregnancy. The mothers were enabled to live for several (four to eight) days, instead of only thirty-six hours,

by the employment of an attenuated virus. Microscopic sections of the placenta and its attachment, colored with gentian violet, showed a large accumulation of the parasites on the maternal side of the placental epithelium, whilst the foetal side was entirely free from them.

These experiments also prove that the relatively great size and complete immobility of the anthrax microbe often cause its accumulation in the smallest capillaries, and absolutely prevent its transit through the glandular epithelium of the special organs, so that its presence in the bile, urine, and milk can only be due to an accidental hemorrhage, whilst the ærobie quality of the bacillus forbids its entrance into the tissues.

This disease, then, offers an exception among the virulent diseases, as is shown by the other experiments.

*The bacillus of symptomatic anthrax* can, on the contrary, pass by the placenta and confer immunity upon the foetus, and, as is already known, freely penetrates the tissues.

*Chicken Cholera.*—In the experiments on the rabbit, all the tissues and the products of secretion were found impregnated. The vesicles of Graaf proved as virulent as the blood. Owing to the season of the year in which these experiments were undertaken, enough impregnated fowls could not be obtained to determine with certainty if the eggs were also virulent when passing by the oviduct.

*Septicæmia.*—The septic vibron of Pasteur was chosen for these inoculations: these pass the placenta less readily than the virus of the two former.

Though the microbes of anthrax cannot pass from the mother to the foetus, the reverse transmission was clearly demonstrated. With a capillary trocar, virus was injected into the foetus of guinea-pigs, which are easily accessible, and after the short period required for the propagation and increase of the microbes the mother in every case became affected. The autopsy then showed the curious anomaly of a virulent mother and one virulent foetus while all the other foetus were healthy.

Perhaps the future perfection of these studies will aid in solving the theory, which has been so much discussed, of the syphilitic infection of the mother without direct inoculation.

**PHENOMENA OF DEATH BY COLD.**—MM. Ch. Richet and P. Rondeau (*Transactions de l'Académie des Sciences, Paris*) find that plunging an animal into cold water is inadvisable for experimentation, as the impression made upon the skin by the water excites the nerves of sensibility and produces a tetanus which does not occur with dry cold. The resistance of dogs to cold is too great to employ them with advantage. They employ shaved rabbits, around which are coiled flexible tubes; in these a current of salt water—7° C. is turned, and by this means the temperature of the animal is lowered rapidly. In two hours the temperature is reduced from 38° C. to 18° C.

When the temperature reaches 25° C., the respiration commences to be ineffective: the rhythm is not, however, altered; the fulness of inspiration is merely diminished. The inspirations are still sufficient for life, and a rabbit whose temperature had been reduced to 17.7° C. recovered, when again warmed, without the aid of artificial respiration.

When the temperature is reduced below 17° C., the functions of the nervous system are seriously diminished, but not abolished. Reflex movements remained in several cases with a reduction of temperature to 15°, 14.2°, and 13.8° C. The excitability probably disappears not because the nervous system is chilled, but because the circulation in its tissues is stopped. The spontaneous movements disappear before the reflex; the reflex movements of the cornea before those of the members. At a temperature of 16° C. the reflex movements are remarkably slow, entirely analogous to those of the cold-blooded animals. The sense of pain is not lost at this temperature.

From the beginning cold has the effect of diminishing the number of the heartbeats. In the rabbit the pulsations at 23° C. are still about 80 per minute, but at 17° C. are reduced to 10 or 12. Here the manner of contraction of the heart resembles that of the turtle: the systole commences with the auricles, and by a vermiform movement extends to the ventricles.

The apparent state of death, characterized by all its signs, can last a half-hour (thirty-one, twenty, eighteen minutes).

For practical medicine this is important, as it indicates that human beings



who have been frozen and no longer present the signs of life may still be resuscitated by external warmth and artificial respiration.

Therefore the respiratory and cardiac functions can be suspended for half an hour without death being a necessary consequence. A rabbit chilled to  $19.3^{\circ}\text{C}$ ., whose heart still beat, though slowly, was not asphyxiated by a complete obliteration of the trachea which was continued for ten minutes; the same animal, again warmed to  $32^{\circ}$ , was asphyxiated in four minutes.

Thus the non-hibernating animals present the same phenomena when they are frozen as the hibernating. The lowering of the temperature retards the chemical phenomena, and consequently diminishes the irritability and all vital phenomena.

**ABSCESS OF THE LIVER AS A SEQUEL OF TYPHOID.**—A case illustrating this rare accident, in a boy 12 years of age, is reported (in the *Berlin. Klinische Wochenschrift*) from the Strasburg Kinderklinik of Prof. Kohls. The case was one of marked type, with considerable fever and diarrhoea, but without albuminuria. In the fourth week (twenty-seventh day) there was a chill and high fever; two days later a tumor and tenderness were noticed in the hepatic region; increase in percussion-dulness, and chills, indicated suppuration in the liver. The patient died in collapse on the thirty-sixth day. There had been no jaundice. Autopsy showed great enlargement of the liver, and on section numerous collections of pus were seen, which were subsequently observed to be located in the dilator canals for the portal vein, the intima showing purulent shreds upon its surface, which were uneven. The same state of affairs existed in the portal vein itself,—i.e., distention, with comparatively thick pus; and upon slitting up the ramifications they were observed extending into the multiple abscesses mentioned above. In a few hepatic veins there were some adherent thrombi, and the intima of the vena cava showed a rough place upon its surface as large as a bean. The lymphatics extending from the right iliac fossa were also suppurating, and one of the mesenteric veins showed a purulent thrombus. The appearances in the intestines were not unusual. Peyer's glands were swollen and pigmented, and a few

submucous extravasations were found in the ileum.

The treatment had been principally by antipyretic methods,—at the first lukewarm baths, and subsequently, as soon as the morning temperature began to fall, by full doses of quinine and salicylic acid.

A similar case, with recovery, was reported by Sidlo (*Militärärzt*, 1875, No. 23). It was that of a girl, 10 years of age, who was taken sick with a high fever, headache, constipation, meteorism, ileo-cæcal gurgling, and enlarged spleen. On the fifteenth day of sickness there was complete apyrexia; but two days later fever again appeared, which during the next two days reached  $40^{\circ}\text{C}$ . ( $104\frac{1}{2}^{\circ}\text{Fahr.}$ ), with watery stools, meteorism, delirium, roseolous eruption, and again splenic enlargement. On the thirtieth day the temperature of the child was again normal. On the thirty-second day she had a chill lasting an hour and a half, with great pain in the side of the breast, and, after repeated chills, there was also pain in the hepatic region. Three days later, the fever continuing, the liver was enlarged, and jaundice appeared. From this day on there was rapid increase in the area of hepatic dulness, and on the forty-third day the lower border of the liver extended below the line of the navel; there was also an increase in the spleen, and collateral circulation in the superficial epigastric veins. The next day there were repeated chills, and abscesses developed under both mastoid processes, on the right side of the forehead, and the left temple, and later an immense collection of pus formed over the fifth and sixth ribs, which in a short time filled the entire right axilla. Great emaciation was noticed. The thoracic swelling began to diminish on the eightieth day, and in five or six days had disappeared. On the eighty-fourth day there was a sudden attack of pain in the abdomen, with chill, Hippocratic countenance, discharge of bloody purulent masses in the stools. Twenty-five of such passages occurred the next day, and ten at night, and on the following day twenty. From this on, there was rapid improvement, the liver-dulness quickly diminished, and icterus and collateral circulation disappeared. On the one hundred and twentieth day the child had completely recovered. In this case the purulent collection may have been external to the liver.

# PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, JANUARY 27, 1883.

## EDITORIAL.

### THE UNITED STATES PHARMACOPŒIA.

No. 4.

A VERY important new preparation, whose name will probably convey to most of our readers no idea of its use or value, is *Ferri Oxidum Hydratum cum Magnesia*. Much better would it have been for the committee to have adopted the name of the German Pharmacopœia instead of this hopelessly ponderous appellation: "*Antidotum Arsenici*" conveys a very definite idea, and is brief. The new antidote is without doubt superior to the old hydrated sesquioxide of iron; indeed, it is merely the old friend in a new and improved garb. Magnesia added to a solution of a sesqui-salt of iron precipitates the sesquioxide; the excess of magnesia is not irritant, like ammonia or potash, and has the further advantage of adding to the efficiency of the antidote. In a case of arsenical poisoning agitate magnesia in excess with the tincture of the chloride of iron, or with any of the sesqui-iron-solutions, pour off the liquid, and administer the bulky precipitate freely,—the work of a moment, at a time when seconds well tended will yield, it may be, years of life.

*Glycyrrhizinum Ammoniatum* is a concentrated, very elegant substitute for liquorice, occurring in brownish-red scales, freely soluble in water and in alcohol, and having a very sweet taste. As an addition to mixtures having neither an acid nor an alkaline reaction, and as a means of disguising the taste of quinine in powder, this new preparation seems to have a very decided field for usefulness. Five grains of it may be given at a dose.

*Mistura Ferri et Ammonii Acetatis* is Basham's mixture, which may now be ordered as officinal. Unfortunately, there is a serious error in the officinal formula, which, to our thinking, the apothecary is well justified in correcting. The formula seems to be based upon that of the German Pharmacopœia; but in the transfer the proportionate amount of acetic ether has been very much increased. It is well known that this ether is absorbed with difficulty, and when in sufficient amount is very apt to disturb the stomach and give rise to unpleasant eructations. There seems to be enough of the ether in the new Basham's mixture to embarrass seriously the gastric functions. The evil is certainly not lessened by the facts that the ether seems to be of no value in the preparation, and that the cases to which the remedy is applicable are usually already suffering from digestive disorders.

The Granulated Citrate of Magnesia appears to us to be a very good preparation, and from its greater convenience and uniformity it ought in a great measure to replace not only the old solution, but various proprietary aperients. The officinal title is *Magnesii Citras Granulatus*, and the dose a teaspoonful to a tablespoonful.

Compound Liquorice Powder, a most useful drug, is for the first time recognized by the United States Pharmacopœia. *Sapo Viridis* and its tincture also represent a class of important preparations introduced from abroad, which have found favor, but are now first officially naturalized.

*Spiritus Odoratus* is cologne. The introduction of perfumery receipts into the national Codex is a practice which ought to have been strangled in its conception.

In taking leave of the Pharmacopœia, it seems proper for us to answer an inquiry which is made by a correspondent (see "*Notes and Queries*"), and which we doubt not has arisen in the minds of most of our readers,—What are we to do about it? We agree with the general sen-

timent that the Pharmacopœia Committee have been injudicious,—that they have often sacrificed practical utility to an imaginary scientific ideal; but one evil cannot rectify another, and to refuse to obey will only bring chaos. We are informed that the Baltimore pharmacists recently held a meeting in which, after talk about discarding the new Pharmacopœia, they agreed to wait until the United States Dispensatory should appear, and by interpreting the national standard render it available for practical needs. We opine that by the aid of this and other commentaries, all of which we trust will loyally but not blindly support the Pharmacopœia, druggists will be enabled easily to conform to the changes,—changes, most of which, be it remembered, are not wrong in their direction, but in their suddenness and extent. When old names are employed for preparations which have been dropped, the prescriber has a right to expect the formula of 1870 to be complied with; but after the appearance of the commentaries most apothecaries of the first class will conform to the new revision, and the only way in which the practitioner can protect his patients is to see that all apothecaries that he patronizes use the new standard; otherwise sometimes a tincture will be of one strength, sometimes of another.

#### PUT THE BLAME WHERE IT BELONGS.

**D**URING the past week a suit was brought before our courts in this city that deserves more attention than it has received from the medical profession. As far as the facts have been published, it appears that it was a case in which a practising physician was sued for malpractice, because a servant-girl, suffering with the measles in a crowded house, was sent to the Municipal Hospital, where she was detained and treated, but during convalescence was seized with varioloid, from

which she also recovered. Suit was brought against the physician for material damages for negligence in not exercising sufficient care in diagnosis to discriminate between measles and variola, and in advising the removal of the patient to the pest-house, where she was exposed to infection and was needlessly made to suffer physical distress and incur the additional danger to life of an attack of variola.

Stating the matter from the stand-point of the physician, however, we have a case suffering with some form of acute eruptive zymotic disease, which is in all probability contagious. There are reasons why it is desirable, even necessary, that the patient—a servant in a family—shall be removed to some institution for treatment, especially since the symptoms suggest smallpox. Under these circumstances it seems that the proper, if not the only, plan of action would be to follow the course pursued by the attending physician, and to report the suspicious appearances to the Board of Health, allowing the entire responsibility of the after-treatment of the case to rest in the hands of the city authorities.

As cases of this kind are not of rare occurrence, and as any physician is liable to be made a defendant in similar speculative suits for damages, suffering the annoyance and loss of time in attending court, even if so fortunate as to succeed in obtaining a non-suit, it is certainly worth the while of our medical societies to move in the matter, to protect their members, by obtaining legislative remedy.

It certainly appears that the fault in such a case as the one mentioned justly lies with the city authorities in failing to provide proper accommodation for persons suspected of suffering from smallpox or other contagious disease. A case of measles sent to the City Hospital has a right to be kept from exposure to variolous contagion. It is an intolerable outrage that a patient, while under the charge of the city authori-

ties and ill with some other form of disease, should be carelessly subjected to the greatly-added risk of an attack of smallpox, when reasonable foresight would prevent it. Isolation alone is needed. The individual, when taken into the charge of the health-officers, should be placed upon a stretcher and protected from cold after removal from his bed by being wrapped up in well-disinfected blankets, then carried into the ambulance and conveyed directly to the hospital, where he should be placed in a detached pavilion ward, perfectly isolated from all communication with the smallpox wards. He should be allowed to remain there until the diagnosis is beyond question, when he should be finally put in the appropriate department of the hospital. We assert very positively that the profession cannot endorse the present system at the Municipal Hospital, by which persons are cruelly exposed to the entirely unnecessary risk of an attack of variola. It cannot approve of the present method by which unvaccinated patients, whose only crime consists in being suspected of smallpox, are placed in the ambulance cheek by jowl with others who really have the disease; and it is by no means satisfied that the quarantine of the institution referred to is fully up to the present requirements of medical science. Are we doing all that we should do or all that we can do to limit the spread of contagious disease? Does not this suggest a subject for consideration by the Philadelphia County Medical Society or the College of Physicians?

#### A NEW CITY HOSPITAL.

A PETITION has been sent to Councils asking for the removal of the present pauper population from the Almshouse in the twenty-seventh ward to some other locality, and suggesting the propriety of devoting the public property at Blockley to the purposes of a city hospital. It is urged that the buildings are entirely too

small to accommodate the able-bodied and infirm paupers, the institution being disgracefully overcrowded; that these would be better off in some place of refuge outside the limits of the built-up portions of the city; and, most forcibly, that the need of increased free hospital accommodation to suit the growing demands of Philadelphia requires that some change of the kind should be made at an early date. It is said that twenty thousand dollars will be all that is needed to make the alterations in the buildings to fit them for hospital purposes. This is a project which must receive the hearty endorsement of the medical profession.

#### A COMMISSION ON RIVER-POLLUTION.

THE water-supply of Philadelphia having been recently contaminated so perceptibly as to make it the subject of general complaint, and to render it unpleasant, if not unfit, for drinking purposes, many of our citizens have been compelled to resort to the use of melted (imported) ice, and boiling and filtering of the river-water has generally been practised. In some sections of the city, pump-water is being extensively used; and this may be connected with some severe local outbreaks of diphtheria, such as has existed in Frankford, for instance. It appears that the emptying of gas-tanks at Reading is to be accepted as the explanation; but if the city of Reading can pollute the Schuylkill with the refuse of gas-works in winter, it has an equal right to empty sewage into it in summer,—a right which we believe it exercises most lustily. Other towns along the river may and do pollute it with impunity. A commission for the protection of rivers from pollution is badly needed in this State, and we hope that the bill referred to the Judicial Committee of the State Legislature last week, appointing such a Board, to consist of five members, will be reported favorably. Although common



law affords a remedy for the pollution of streams, yet it is of primary importance to provide some responsible head charged with the express duty of attending to the matter, and of preventing such contamination. If Philadelphians must, however, subsist upon the sewage of Pennsylvania, we can comfort ourselves that the next generation will, under the process of evolution, become adapted to its environments, and will be able to drink occasionally even Croton water without injury.

### LEADING ARTICLES.

#### BURDON SANDERSON ON TUBERCLE-INOCULATION.

THE attention of the medical world has been of late so pointedly directed to the widely-published researches of Koch upon tubercle, and investigation has been so universally directed to testing his methods and reviewing his experiments, that there is a danger that the laborious researches of other pioneers in this field may be overlooked. Whether or not Koch's claims with regard to the identity and relations of the so-called *Bacillus tuberculosis* can be fully substantiated, will very probably soon be determined by more careful clinical observation and more extended physiological experiment; but in any event, and whether his views are finally accepted or not, the great credit will remain to him of having succeeded in directing the attention of the profession anew to the discussion of this subject, as he has challenged its admiration by his patient, painstaking, and prolonged researches in the physiological laboratory. His labors have undoubtedly given an immense impetus and increased interest to the study of chronic pulmonary disease, which has already resulted, we believe, in a clearer conception and more correct views of the pathological characters of this important class of affections than had been held before.

Without reviewing the remarkable experiments of Villemin, made in 1867, which seemed to establish the fact that tuberculosis should no longer be regarded as a constitutional malady, but as one dependent on a specific infection,—in short, a zymotic disease,—or the investigations

of other pathologists to which they gave rise, notably of Lebert and Wyss,\* Rousstan,† Waldenberg,‡ V. Feltz,§ and others who have continued them, following in the same track, we propose here to consider briefly only the important contributions to this subject made by Burdon Sanderson in 1867 and 1868, which were embodied in a report made in conjunction with the medical officer of the Privy Council of England and published in the tenth and eleventh annual reports of that body.

These experimental and anatomical researches have, in view of recent developments upon the subject, acquired a new and special interest. As they are now out of print and inaccessible to most readers, the portion of the first report embodying Dr. Sanderson's own researches has been recently republished in the *Practitioner*,|| where a part of the second report also appears. These carefully-conducted investigations merit more than a mere passing consideration, and will repay a brief review.

The problems which the author had in view in undertaking this series of experiments might be formulated as follows:

1. Is it true that the inoculation of tuberculous matter produces in the lower animals morbid changes so constant in their anatomical characters and development that they may be regarded as constituting a disease? And, if so, in what terms can it be defined?

2. In what respects do the morbid results produced by the inoculation of tubercle resemble or differ from other diseased conditions communicable by the same process, particularly pyæmia, glanders, and syphilis; and to what extent are they comparable with the effects produced by the introduction into the circulation of inert solid matter in a state of fine division?

In order to determine the facts upon which just and satisfactory conclusions could be drawn so as to solve these problems, three series of experiments were undertaken: in the first series, healthy animals were inoculated with tubercular products obtained from human tissues; in

\* Beiträge zur Experimental-Pathologie der heerd-artigen umschriebenen disseminirten Lungenentzündung, so wie der Uebersagung der sogenannten Tuberculose und anderer entzündlichen und verschiedenen neoplastischen Producte von Menschen auf Thiere. Virchow's Archiv, vol. xli., 1867.

† Recherches sur l'Inoculabilité de la Phthisie. Paris, 1867.

‡ Die Impfbarkeit der Tuberculose. Allgemein. Med. Central Zeitung, December, 1867.

§ Résultats d'Expériences sur l'Inoculation de Matière tuberculeuse. Gaz. Méd. de Strassbourg, 1867.

|| Vol. xxix., Nos. 3, 4, 5, and 6.

the second series, animals were inoculated with morbid products obtained from the first series of animals; and in the third, the animals were inoculated with the material taken from diseased organs of animals in the second series.

In the first series the pathological appearances in twenty-two animals were quite uniform; they may be briefly stated as follows:

1. Induration and thickening of subcutaneous connective tissue.
2. Formation of pus in the track of the wound.
3. Formation of secondary subcutaneous abscesses in the neighborhood.
4. Formation of bands of induration, analogous to farcy cords, between one abscess and others in the neighborhood.

The pus found at the site of the injection did not have the characters of healthy human pus, but was always more or less cheesy. Besides the ordinary pus-corpuscles, there were observed, under the microscope, larger bodies of irregular contour, which resembled conglomerates and always contained fatty particles.

The structural character of the connective-tissue indurations was observed (1) in the cords of induration connecting one abscess with another, and (2) in the walls of the abscess. The cords were found to consist of a dense fibrillated stroma, in which the direction of the fibrillation was parallel to the axis of the cord. This stroma was not in the slightest degree wavy, and when fine sections of it were made in the direction of fibrillation it was found to be studded with innumerable staff-shaped nuclei, all of which assumed the same direction as that of fibrillation. The walls of the abscess always presented the same structure. They invariably consisted of condensed connective tissue, having the same characters as that which formed the cords of induration. This tissue was continuous externally with the normal subcutaneous tissue. Internally the abscess-wall was lined by a layer of pulpy substance. This material (so-called pyogenic membrane) was found, when examined separately, to consist of spheroidal cells embedded in the meshes of a reticulated, transparent stroma. When examined in sections made perpendicularly to the abscess-wall, it could be satisfactorily made out that this stroma was continuous with that of the dense fibrillated connective tissue on which the pyogenic membrane rested.

In cases in which no suppuration occurred, if the animals were killed within four weeks after inoculation, the only morbid alteration which could be discovered consisted in the existence at the seat of inoculation of a node of hardened and thickened skin. If killed at a later period, seven or eight weeks after inoculation, other nodules were found in the neighborhood of the original one, which, except that they were more disseminated, resembled the little masses already referred to, each being enclosed in an indistinct capsule of reticular connective tissue, similar to that which entered into the composition of the nodule. On examining the smallest of these granulations in the recent state, nothing could be discovered, except that it was a mass of hard cells like lymph-corpuscles. In sections of the hardened tissue it was found that these corpuscles were enclosed in a fine mesh-work of fibres, in structure resembling that of a lymphatic gland in incipient fibroid degeneration. In the deeper-lying structures, in the loose connective tissue between the muscular and tendinous layers, it was common to find minute granulations, which were proved to be inflammatory in their origin and developed from connective-tissue corpuscles.

In all the animals subjected to inoculation with the tuberculous material, the subcutaneous lymphatic glands were more or less diseased, the changes consisting in enlargement (hypertrophy), induration, and caseous degeneration, this last resulting either in softening or in the formation of cretaceous concretions. In every instance those glands were the most affected which were in the neighborhood of the inoculation-wound. In some these glands became enormously enlarged. Of the twenty-one guinea-pigs inoculated successfully, in three only were the lungs found free from disease. In the rest the lesions observed consisted in the formation of nodules of gray induration, which were disseminated in fourteen, partly disseminated, partly confluent, in the rest. These changes were in two animals associated with adhesive pleurisy. The nodules presented great uniformity of appearance, and were more numerous on the pleural surface than in the parenchyma of the lung. The smaller tubercles had the semi-transparent appearance usually recognized as characteristic of miliary tubercle. In the larger ones the translucency was con-

fined to the external parts, the centre being opaque and having a softer consistence than the rest. From their form and structural relations it is evident that they were interstitial new growths, which did not displace the lung-tissue, but were incorporated with it and formed part of it. The microscope showed that, "as regards the lungs, the effect of the tuberculous inoculation is to give rise to the growth of new adenoid tissue in the interstitial substance which surrounds the smallest bronchioles and constitutes the alveolar walls." The nodular form and disseminated character of the growth seemed to the author to be partly accounted for by their relation to the terminal bronchioles, for it may be readily understood that the growth takes its start from the bronchiole, and, extending peripherally, would be likely to assume the conical form of that part of the lung to which the bronchiole leads.

In the formation of nodules in the spleen, as in the lymphatic glands, Dr. Sanderson states that we have an example of a process which stands midway between hypertrophy and new growth. The original structure of the nodule cannot be distinguished from that of the tissue in which it originates, *but its development is different*. Normal in its anatomy, it proves itself to be morbid by undergoing fatty degeneration and necrosis.

The results of the experiments of the second and third series differed in no important respect from those observed in animals inoculated directly with human tuberculous material. It is worthy of notice, however, that although the subcutaneous lesions were as great in some of the cases as in those of the preceding series, the local effects were lighter, and in some inconsiderable.

Although, in reviewing all the experiments of the different series, it was found that suppuration at the point of inoculation, and also in its vicinity, occurred in nearly all, yet this was not essential to the production of internal lesions. In all of the infected animals, however, the lymphatic glands corresponding with the point of inoculation were enlarged; usually there was softening; there was always caseous degeneration. In eight infected animals the lungs were found quite free from disease. Probably in no instance was the liver absolutely healthy, the lesions being variable in nature and extent. The spleen was also

enlarged, except in one case. The internal lymphatic glands, receiving their tributaries from diseased organs, were always themselves enlarged, indurated, and caseous.

The reply to the first query, therefore, must be that the inoculation of tuberculous matter produces in guinea-pigs morbid changes so constant, both in their anatomical character and development, that they may be regarded as constituting a disease. The true relation of the human disease to its bestial derivative has not been yet determined. The results of the entire inquiry are summed up in the following propositions:

"1. The characteristic product of tuberculosis is not an aggregation of shrivelled particles of irregular form, but a tissue composed of lymph-corpuscles held together by a net-work of hyaline connective substance.

"2. There is a close structural analogy between this tissue and that of certain follicular organs belonging to the lymphatic system,—e.g., the follicles of Peyer, the ampullæ of the lymphatic glands, etc.

"3. All the favorite seats of tubercle are naturally characterized by the presence of this tissue, which, from the analogy stated above, may properly be called *adenoid*.

"4. The natural distribution of adenoid tissue in the body is in intimate relation with the lymphatic system. In the great serous membranes (which Von Recklinghausen's discoveries have taught us to regard as walls of lymphatic reservoirs), it forms sheaths round the blood-vessels, or masses of microscopical dimensions and irregular contour underneath the epithelium. In the solid viscera it is distributed here and there in the course of the lymphatic channels.

"5. In the peritoneum, tuberculosis primarily consists in the enlargement or overgrowth of these sheaths or microscopical masses of adenoid tissue, and consequently the tuberculous nodules which are formed have the same intimate structure, and stand in the same anatomical relation to the vessels and epithelium. In the viscera the essential lesions also consist, not in new growth, but in overgrowth of pre-existing masses of adenoid tissue.

"6. The primary local lesion in artificial tuberculosis, whether the cause be simple wound or specific inoculation, consists in the development at the seat of injury of granulations or nodules which have similar struc-

tural characters with those of adenoid tissue elsewhere, but cannot as yet be shown to be in relation with the absorbent vessels.

"7. The first step in the dissemination of tubercle consists in its being absorbed primarily by the lymphatics (which convey it to the lymphatic glands, of which they are tributaries), and secondarily by the veins. Having thus entered the systemic circulation, it is distributed universally by the arteries. The serous membranes seem, however, by preference to appropriate it, and from them it extends by contiguity to the superficial parts of the organs which they cover.

"8. The final stage of the process consists in the tertiary infection of the glands of each diseased organ, which glands consequently undergo enlargement and induration, and eventually become partially caseous. The enlargement is due to the multiplication of cells in all the tissues of the organ, but more particularly in the alveoli,—the hardening to a process of fibrous degeneration,—while the caseation consists in slow necrosis of the previously hardened and anæmic parts. From the first the gland is incapable of performing its functions, but it is not until induration commences that the absorbents of the organ to which it belongs are completely obstructed.

"9. In the liver of the guinea-pig, and in some other organs, tuberculous tissue undergoes a fibroid degeneration and caseation, the results of which cannot be distinguished from those observed in the normal adenoid tissue of the lymphatic glands and of the spleen.

"10. As regards the question of a *specific contagium* of tubercle, we think it very important to note that this is not as yet disproved by the facts of traumatic tuberculosis. It still remains open to inquiry whether or not injuries which are of such a nature that air is completely excluded from contact with the injured part are capable of originating a tuberculous process. The results of the following experiments undertaken at the instance of Mr. Simon, with special reference to this question, seem indeed to suggest that they may not be so. Setons steeped in carbolic acid were inserted in ten guinea-pigs on the 24th of September, 1868, each animal receiving two. At the same time, extensive fractures of both scapulæ were produced on five others, care being taken not to in-

jure the integuments. No tuberculosis or other disease of internal organs resulted in either of the cases. The facts certainly point to the necessity of further investigation in this direction."

Subsequent studies in this field, made by Hueter and De Rausche while engaged in investigating the proximate cause of inflammation, appear to establish the fact that wounds protected from infection do not develop inflammation. If Dr. Formad's\* observations are correct, however, inflammation is necessary to the development of tubercle, but scrofulous individuals only can have this peculiar tuberculous inflammation. F. W.

## CORRESPONDENCE.

### CHICAGO LETTER.

THE management of our county hospital has not been above suspicion. For some time past there had been a pretty free local discussion of the affairs of this important charity, resulting in a pseudo-investigation by the board of commissioners,—a political body too much interested to inquire honestly into and punish offences against the Trust, lest, through an employé, they offend political support. The whole matter was brought before the December grand jury; but that body appeared too sympathetic to do more than dodge. It was represented to the jury that the hospital had been mismanaged, the money of the county appropriated for the maintenance of a public charity squandered, and false entries made in the books to cover the frauds. When the charges were first brought to the notice of the grand jury, that body signified its willingness to investigate, and an understanding was entered into that it would be taken up at a stated time; but when that time came, obstacles were thrown in the way, and so on, from time to time, notwithstanding about forty witnesses were kept present waiting. The chief witness charges that the hospital people abducted him. This hospital costs the county in the neighborhood of one hundred thousand dollars a year, and is too important an institution to be given over to misrule without the interposition of some objection. The grand jury for January is said to be made up of such material as will insure a complete investigation should the matter be laid before it.

Our State Board of Health still continue the work of weeding out the tares of the medical profession coming within their jurisdiction. Thirty-one cases of imposition have lately been brought to light, where the parties had

\* "The Bacillus Tuberculosis, and some Anatomical Points which suggest the Refutation of its Etiological Relation with Tuberculosis." *Ante*, page 109.







falsely made oath that they were graduates of foreign medical universities, the latest being that of a barber who personated a real graduate of Göttingen. In most of the cases, it appears, the diploma used represented some deceased physician.

The so-called private lying-in hospitals have been receiving some attention from the police. One establishment in particular was placed under surveillance, resulting in catching the madam in the very act of delivering a woman of a five-months' fetus. The affair created quite a sensation, but, like all such occurrences in a large city, is soon forgotten.

The senior class of our new school—College of Physicians and Surgeons—has had a pretty heated contest over the selection of a valedictorian. The proceedings were not the most dignified, and, though two men have been elected to the position, it is not considered settled.

The City Council have just completed the list of streets ordered to be paved during the coming summer, and it is gratifying to observe the somewhat slow, but nevertheless certain, displacement of the unwholesome and bad wooden pavement for the more durable and dry macadam and asphalt. As a sanitary measure, this change is one that should command the approval of every resident.

F. W. M.

January 15, 1883.

## PROCEEDINGS OF SOCIETIES.

### PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting of the Society was held at the hall of the Society, November 22, 1882.

#### DISCUSSION ON STYPTICS.

Dr. F. J. Buck thought that it would be inadvisable to abandon entirely the use of styptics. They had a certain degree of practical value. He had seen life saved by their use in cases in which other methods did not apply. One instance was of hemorrhage of the frænum from chancre. In this case he could not see how any other method would answer. Compression or ligation could not be used, and styptics were the only means.

Dr. Willard was glad to see the subject brought up. Some of the worst results and the worst sloughs he had ever seen were in cases in which strong styptics had been used. The practice was slovenly, unsurgical, and unscientific. It was in the end really far easier to find and close the vessels at the time than to stop the bleeding by plugging with rags steeped in various solutions. In cases of oozing from surfaces we can resort either to pressure or to the action of cold air. In hospital practice he had often found wounds

treated by the free use of styptics, and these would act as irritants, which would set up inflammation and cause sloughing. It is, however, in cases of a small bleeding surface possibly allowable to use mild styptics, hot water being one of the best; but it is better in most cases to search for the bleeding vessel and secure it, or apply pressure. Styptics may stop the hemorrhage for the time, but their use is often followed by secondary hemorrhage very difficult to control. He thought the surgeon who used styptics did not do his duty, when he knew that the bleeding proceeded from either injured arteries or veins.

Dr. Sheppard said that cases sometimes arise in which no means of controlling hemorrhage other than the use of styptics is applicable. He instanced a case of removal of a portion of the tongue by the galvanocautery, in which secondary hemorrhage occurred, and no ligature could be applied. The choice was between the use of the hot iron and Monsel's solution. The latter was used diluted, and succeeded well. Some clots were, of course, left, but they did not do any harm.

Dr. Eskridge said that surgeons often spoke of the "fashions" in medical practice, and he noticed to-night that surgery also had its fashions. He recollected that some years ago Monsel's solution was highly praised by surgical writers as having, among other properties, the power to *promote* primary union. It appears from Dr. Roberts's paper that it interferes with such result. He would like to know whether any objection existed to hot water. He was in the habit of using this by means of a syringe in epistaxis, or, if the water is held in the palm of the hand, it may be snuffed up by the patient. He has seen it used successfully in bleeding from small vessels, especially in plastic operations.

Dr. Roberts, in closing the discussion, said that in such a case as that mentioned by Dr. Buck—hemorrhage from frænum of the penis—he would either ligate or use torsion. Hot water was good for bleeding from small points, and was the least objectionable of all the styptics. It should be used at a temperature of about 105° F. Ice also sufficed, but he did not like to use it, because it chills the patient. He thought, however, that hemorrhage that would stop on the application of hot water would generally stop spontaneously or upon the application of pressure. In such a case as hemorrhage of the tongue, such as mentioned by Dr. Sheppard, he would certainly not advise Monsel's solution. It was the worst of all the styptics. The clots were leathery and coarse, and might get down the throat. He would advise torsion or ligation of the bleeding point, perhaps by passing a thread through the tissues with a needle. In applying pressure to control bleeding we must be careful not to interfere with the venous return by making linear constriction above the wound, as this might cause recurrence of the hemor-

rhage. He thought that Dr. Eskridge was wrong in saying that styptics were popular with surgeons as recently as 1876. Eminent authorities in surgery have generally opposed them in recent times. Billroth, for instance, was against them. Even in the hemorrhage after tonsilotomy, which was said to be sometimes serious, Dr. Roberts did not think styptics required.

#### DISCUSSION ON PUERPERAL HEMIPLEGIA.

Dr. Mills said he had seen a few cases similar to that detailed by Dr. Stone,—one some time since in consultation. A lady was attacked with hemiplegia after confinement, and no heart-disease or other local condition sufficient to account for the trouble could be found. It was probably a case of embolism. Several hemiplegic cases with a history of paralysis, having originated after labor, had come under his notice. The interesting point was, What was the pathological condition? The theory of multiple embolism was generally accepted. The occlusion of arteries at several points could not in these cases be accounted for by the supposition of phlebitis.

A CONVERSATIONAL meeting was held at the hall of the Society, December 13, 1882.

#### DISCUSSION ON DRUG-ADULTERATION.

Dr. Cohen said that it might be supposed that the agitation upon this subject would have had the effect of making druggists especially careful; but within the past week he had occasion, in consultation, to order suppositories of quinine made with cacao-butter, for a diphtheria case, and the next day the nurse showed them to him undissolved in the chamber. On inquiry by the physician in attendance, the druggist (a "first-class" druggist) stated that they had been made with white wax.

Dr. Eskridge said that a friend of his had made some investigations into the strength of laudanum as sold by druggists, and had found many specimens only twenty-five per cent., some fifty per cent., and others seventy-five per cent., of the official strength. The latter were not numerous.

Dr. Ludlow thought the communication of Dr. Leffmann deserving of serious consideration, and was glad the subject had been taken up. This Society will support him in his laudable effort. Of one thing he was sure, and that is that we have a vigilant sentinel on the ramparts. There need be no trouble with the way in which these important facts were ascertained. One might as well find fault with the mode of finding out any fraud. "No rogue e'er felt the halter draw with good opinion of the law." Another point the doctor has brought to the attention of the Society, is the unwarranted action of the recent so-called

revisers of the U. S. Pharmacopœia. Their change in the strength of laudanum particularly, a preparation in so common use, is one of an outrageous character, and deserves the severe condemnation of this and every other well-organized society. Just think!—*fifty per cent.* stronger than now!! This Society should let the druggists and apothecaries know that we *countenance no such change, and that we expect them to use the old formula.* It would be not amiss for us to have a committee of our body to revise the Pharmacopœia for our use.

Dr. Ludlow did not think well of the practice of giving quinia and iron in sugar-coated pills, and said he was, in general, opposed to the plan of using ready-made prescriptions. He thought that each case should be *prescribed for separately*, and each case might require a variation of remedies which the doctor only knows. He cited a case in which he had prescribed a mixture of iron and quinine in pill form, and, finding that the pills were without effect, he investigated the matter, and it turned out that they were passed through the bowels without change. He had one of the unused pills, and they were so hard as to require the blow of a hammer to break them. He thought that it is the duty of the physician to inquire into the standing and ability of apothecaries, and in important cases, or where difficult prescriptions are involved, it is best to exercise some personal supervision in the matter. He did not altogether favor the practice of physicians furnishing their own medicines, as nowadays few physicians had sufficient pharmaceutical knowledge, and, besides, he was afraid that the stomachs of patients would suffer.

Dr. W. R. D. Blackwood remarked that the subject was of the more importance as physicians as well as patients are at the mercy of druggists; because, once a prescription is compounded, it is usually impossible to distinguish without analysis its integrity. In his own experience several serious and indefensible substitutions have been made, in every case by well-known and apparently respectable pharmacists. In one instance cinchonia sulphate was substituted for cinchonidia sulphate, and in another the same drug was dispensed for quinia. The druggists in each instance, when cornered, owned to the fraud. This course will, if not checked, compel us to dispense our own medicines before long, and, as experience shows us that simplicity in prescriptions and less drugging grow on the physician as he gets older in practice, the problem is not so difficult as is thought by many. The druggists are lately not only defiant as to their right to renew indefinitely prescriptions without the physician's order, but are impudent enough to declare openly their ability to prescribe in any or all cases where the patient is foolish enough to let them do so.



## NEW YORK ACADEMY OF MEDICINE.

STATED MEETING, JANUARY 4, 1883.

FORDYCE BARKER, M.D., LL.D., President,  
in the chair.

THE scientific paper of the evening was read by Dr. F. H. BOSWORTH, and was entitled "Tumors of the Nasal Passages."

Dr. BOSWORTH first directed attention to adenoid growths occurring in the vault of the pharynx, and stated that they gave rise to a very common and annoying symptom,—namely, a copious discharge of mucus or muco-pus from the nasal passages. The true condition is commonly obscured under the exceedingly meaningless term "nasal catarrh." He then mentioned some of the conditions which might give rise to nasal catarrh, as chronic rhinitis, dry catarrh, nasal polyp, deviation of the septum, necrosis, foreign bodies, the existence of these adenoid growths in the vault of the pharynx, etc.

He believed that these adenoid growths are simply an hypertrophied condition of the normal tissues in the region in which they occur. He then described the faucial tonsil in its normal condition. The presence of these growths is the source of inflammatory changes resulting in hypertrophy, and was first described by Luschka. They are more or less distinctly outlined, and vary in size from that of a coffee-bean to that of a large chestnut, even sometimes larger. He had submitted several specimens to Dr. Heitzmann for microscopical examination, who reported that their true nature is an hypertrophy of the normal glandular elements in this region, and not true adenoma or tumors. He had had seventy-five cases under his observation,—forty-nine males and twenty-six females. Under ten years of age there were five cases; from ten to fifteen years, sixteen cases; from fifteen to twenty, twenty-seven cases; from twenty to thirty, twenty-three cases; from thirty to forty, two cases; from forty to fifty, one case; and over fifty, one case.

The lecturer remarked that there is a striking analogy between the appearance of these growths and the faucial tonsil, but the most frequent condition with which they are associated is hypertrophic rhinitis. In ten cases he had found this associated with enlargement of the faucial tonsil; in four cases it had been associated with dry catarrh. The most prominent cause of the condition is hypertrophy of the mucous membrane excited by the stimulus of repeated colds. He did not believe that it is ever the manifestation of systemic dyscrasia.

The diagnosis is usually easy, and for this purpose digital examination is not absolutely essential. For illuminating purposes, however, an ordinary gas-jet is not sufficient, but sunlight should be employed. The prominent and most troublesome symptom is an ex-

sive discharge of muco-pus. The source of the discharge is in the hypertrophied glands themselves. Another symptom is the altered character of the voice, the voice being like that of one suffering from cold in the head: it has been termed the "dead voice." In order to give rise to this change in the voice, the growth need not be large. The head-register fails first, so far as singing is concerned, and is muffled. With reference to the impairment of the hearing, it is not due to pressure upon the Eustachian tube, as had been supposed by some. He regarded extension of catarrhal inflammation to the Eustachian tube as exceedingly rare. Tinnitus aurium might perhaps be caused partly by pressure. Nasal stenosis is a prominent symptom, and is present in cases where the growth has not attained to an unusual size. Cough is present in certain cases.

His treatment was extirpation by the use of a modification of Jarvis's snare-écraseur. He could not recommend the actual cautery or acid caustics, which were employed by some.

Nasal polypi are myxomatous tumors. He had never met with one in the naso-pharynx. A single polyp is very rare. At his clinic at Bellevue Hospital there had been treated during the past year one thousand six hundred and forty-one cases, and nineteen of these were cases of nasal polypi. He had had sixteen cases in private practice, which made thirty-five cases which he had seen within a year. The source was usually the middle turbinated bone. He had seen only two cases in which the polyp was attached to the septum. He knew of no cause. It was purely a local disease. It is commonly taught that they are caused by nasal catarrh, but he believed that they frequently occur independently thereof. The most prominent symptom is blocking up of the nasal passages, with profuse watery discharges. Very long and distressing attacks of sneezing are an important sign in diagnosis, especially in the early stage of their development. Spasmodic asthma, he thought, is of more frequent occurrence than is generally supposed. Their form is usually pear-shaped, and, unless they develop posteriorly into the naso-pharyngeal space, their size could be no greater than that of the nasal passage.

In the treatment, Jarvis's snare-écraseur furnishes all the advantages and none of the disadvantages of Hilton's snare, and the important principle in it is more that of the écraseur than that of the snare. One objection to Jarvis's snare is the fact that the hand is always in the line of inspection, in order to obviate which he had constructed an instrument which is a combination of Jarvis's écraseur and Wilde's snare. He did not believe it necessary to apply anything with the view to the prevention of a recurrence of the growth.

## DISCUSSION.

Dr. LEFFERTS said there were many points in the interesting paper which need not be discussed, as they were generally accepted; but there were certain others to which he wished to take decided exception. First, with reference to the adenoid growths: they were of very common occurrence, as any one conversant with the literature was aware, and as was also shown by the number of specimens passed round by the author of the paper. There are certain cases among young persons in which the hypertrophy is hardly sufficiently abnormal to demand active treatment. It was not always necessary to remove these hypertrophied tissues, for very often they disappeared by a gradual process of atrophy towards the period of puberty. There were cases, of course, in which they attained to sufficient size to block up the nasal passages to a certain degree, interfering with the voice, in which he would recommend surgical interference. That there was a gradual process of atrophy at the age of puberty was a fact which was not sufficiently appreciated even by those in his own specialty. With regard to the treatment, Jarvis's snare was a good instrument, but it was a fact that it had not been commonly accepted by the profession, and he believed that a certain form of biting forceps possessed the advantage that they could be used by the unskilled operator with greater ease than could the snare, and just as effectually. Passing from the subject of adenoid growths, Dr. Lefferts spoke of nasal polypi, and referred to two forms of growth occurring in the nasal passages which had not been mentioned by the author,—namely, cystic tumor and papilloma. He had seen one case of the former, and had found the record of one in literature. He had known papilloma springing from the septum to give rise to dangerous hemorrhage. With regard to the head-register being the first to be affected in the singing voice from the presence of adenoid growths, he had not found such to be the case. According to his observation, the medium register was the first to be affected.

Dr. BRANDEIS was of the opinion that, along with the existence of the adenoid growths referred to, there must be some inflammation of adjacent tissues, and that the inflammation was liable to extend up into the Fallopian tubes, and he believed also that impairment of the hearing was consequent largely upon obstruction of the tube arising from a congestion or swollen condition of its mucous membrane. Air was prevented from entering the middle-ear cavity, and the drum-head assumed malposition from pressure of air upon it externally.

In reference to the use of the actual cautery in the naso-pharyngeal space, he had resorted to it with the greatest benefit, and had never found its use attended with any evil results.

It subverted the double purpose of an *écraseur* and a caustic, removing the growth and preventing a tendency to a recurrence,—a point of much practical importance in cases of nasal polyp.

Dr. LINCOLN thought, with regard to the necessity for removal of abnormal growths in the post-nasal region, particularly hypertrophies of the normal tissue, that it depended altogether upon whether they were the source of impaired health or produced any special discomfort. The discharge which these growths gave rise to might be the cause of harm not only in the pharynx, but, as he believed, also in the stomach, producing indigestion. Besides, as mentioned by Dr. Bosworth, they had a localized influence upon distant parts, as in exciting asthma. A patient under his care had suffered regularly every winter with spasmodic attacks of asthma, which a visit to a Southern climate failed to relieve. There was no apparent cause of the attacks, except a very small adenoid growth in the vault of the pharynx. After this was removed, the asthmatic symptoms entirely disappeared. There were certain cases of malformation of the chest in children which he was unable to account for except from the inability to breathe through the nose, due to the presence of some of these growths. He took issue with Dr. Bosworth in the opinion that all methods of treatment were inadequate except that with the wire *écraseur*. He had published a series of cases in which the treatment had been practised with the galvanocautery and chromic acid with excellent results. The use of the Vienna paste was also a very good method of treatment. Jarvis's snare, however, was an invaluable instrument, for use in both the anterior and the posterior nares, and he believed that nothing could be devised which would replace it. He would call attention to a remedy which he had recently used with most satisfactory results in cases of adenoid growths in the vault of the pharynx, especially where they were of moderate size,—that was, boracic acid.

Dr. ROBINSON was of opinion that, while Jarvis's snare-*écraseur* was probably the best instrument in the removal of these growths, there were other methods which were also quite effectual, such as the galvanocautery, caustics, etc. He would impress the point with regard to the evil influence of sucking out the breast, so to speak, when breathing through the mouth during the presence of an obstruction in the nasal passages. He believed that there was often propagation of the inflammatory process in the pharyngeal space to the Eustachian tube, and an impairment of hearing therefrom.

Dr. BOSWORTH, in closing the discussion, remarked with regard to non-operative interference in cases where the adenoid growth was of small size and the patient had not attained to the age of puberty, when it was pos-

sible atrophy of the hypertrophied structure would take place, that it often happened the period of puberty was at some distance, and the child might be suffering from symptoms which should be relieved. The tendency was to weak throat, sleepless nights, impeded respiration, etc.; and it was the surgeon's duty to relieve such symptoms, even if he felt certain that the growth would become atrophied within a comparatively short space of time. Furthermore, we could never be certain that atrophy would take place even when the age of puberty was reached. With regard to the use of the forceps in the place of the snare, there was the objection that it could not be made to reach the entire growth on account of the peculiar anatomical situation. His opinion that the head-register was the first to be affected in singing was based largely upon the statements of singers themselves. With regard to the extension of catarrhal inflammation into the Eustachian tube, in the numerous cases which he had observed there had seldom been present at this situation evidences of inflammation in the form of redness, swelling, pain, and heat. As to the impairment of hearing, he believed the levator palati muscles had much to do with the admission of air into the middle ear, and that their proper function was interfered with during the presence of adenoid growths in this neighborhood.

## REVIEWS AND BOOK NOTICES.

A GUIDE TO THE PRACTICAL EXAMINATION OF THE URINE. By JAMES TYSON, M.D. Fourth Edition. Philadelphia, P. Blakiston, Son & Co., 1883.

The appearance of four editions of this book in eight years is an indisputable *raison d'être*, and we content ourselves with noting the fact that the fourth edition is, and that it is well done.

## GLEANINGS FROM EXCHANGES.

DIABETES MELLITUS TREATED AT NEUEN-AHR.—In a communication read before the Medical Society of London, Dr. Schmitz, of Neuenahr, gives a number of interesting data obtained from observation of 600 cases of diabetes which had been under treatment at this celebrated health-resort. Of these, 420 were Germans and 180 foreigners; 5 were under 10 years old, 25 between 10 and 20 years, 56 between 20 and 30, 104 between 30 and 40, 134 between 40 and 50, 196 between 50 and 60, 60 between 60 and 70, and 20 between 70 and 80 years of age; 248 of the patients came of families in which diabetes had already appeared; 51 came of families in which some serious psychosis had manifested

itself, 45 more had relatives who were remarkable for eccentricity or irritability, and 42 came of families which were remarkably tuberculous; 93 of the cases were Jews, and of these 48 had diabetic relatives, 18 had relatives with psychoses, and 9 had tuberculous relatives. In 8 cases both husband and wife were at the same time suffering from diabetes; in 183 cases the immediate exciting cause of the disease appeared to be some acute disturbance of the nervous centres, and only in 18 was there any essential disease of the nervous system; in 153 cases the diabetes was attributable to an excessive indulgence in sugar and saccharine food; in 45 cases it was attributable to gout, and in several instances alternated with a gouty attack. It was in these cases that alkaline waters and salicylate of soda were most useful. In 22 cases diabetes seemed to be the result of the exhaustion consequent on some severe and long-continued disease. The specific gravity of the urine varied from 1025 to 1035; the highest was 1042, the lowest was 1013, and in this latter one to five per cent. of sugar was found. The average daily amount of the urine was 2500 c.c. to 3500 c.c.; in only one case was it 9000 c.c.; in 14 cases it was as low as 500 c.c. to 800 c.c., in spite of taking 1600 grains of the sprudel water; but wherever the quantity of urine was small the perspiration was great, and where perspiration became copious the sugar decreased,—which may explain the beneficial action of pilocarpin and of Turkish baths. Generally the day-urine contained most sugar, exercise diminished it, while mental exertion and nervous excitement and pain increased it. The sugar varied from one to three per cent.; in only one case was it as high as eight per cent. When albumen was present, as not unfrequently happened, it seemed to be in inverse relation to the sugar. After the disappearance of the sugar, a material increase of phosphates, and, in some, of oxalates, was noticed. In four cases hippuric acid was present. In two cases sugar was simulated by a form of uric acid when the copper test was used; the fallacy was rectified by the polariscope. When the skin was dry, there were considerable polyuria and much emaciation. If there was a fair amount of sensible skin-action, the emaciation was not marked. Thirty-five cases were very fat, and other 46 had lost little of their former corpulency. The muscular weakness is the consequence, mainly, of degeneration of structure, which affects not only the voluntary muscles, producing the unsteady gait and the easy fatigue, but also the cardiac muscles, producing the small pulse, the feeble heart-contraction, the syncope attacks, and the death by asthenia, the intestinal muscles, producing the constipation, and the ciliary muscles, producing the errors of accommodation. The cardiac weakness accounts probably for some of the cases of death, with accompaniment of coma or

convulsions, which have been attributed to acetonaemia. Of the condition called acetonaemia there were six cases. That it is caused by the absorption of some noxious product of fermentation in the bowels is certain, but whether this is always acetone is doubtful. The case was relieved as soon as a free evacuation of the dark-colored, very fetid contents of the bowels was secured by castor-oil. If this could not be accomplished, the patient died.

The boulimia observed in some of these cases is looked upon as a neurosis, and the craving for sugar is compared with the alcohol-craving of the drunkard. Early loosening and loss of the teeth is often connected as a symptom with the onset of diabetes. In neuralgic attacks, codeia and salicylate of sodium were found to be useful, and salicylic acid lotions are recommended for the relief of vulvar pruritus.

Tuberculosis became developed in the course of diabetes in twenty-six cases only. Impotence was frequently present, but in twelve cases sexual desire and capacity was increased. Balanitis was occasionally observed, and was relieved or cured by strict cleanliness and salicylic acid lotions. Dimness of sight was frequent, partly produced by accommodation-disturbances and partly by turbidity of the lens, which disappeared with an improvement in the diabetes, except in three cases, where there was cataract, which was successfully extracted in all. Boils were common, produced by nutritive disturbances of the skin, as also erysipelas and phlegmon.

According to his experience, the prognosis of diabetes is more favorable than is generally stated.—*British Medical Journal*, December 23, 1882.

**PASTEUR ON RABIES AND PROTECTIVE INOCULATION.**—A communication from M. Pasteur was recently presented before the Académie de Médecine, Paris, in which some definite ideas of the causation of this disease are set forth. He asserts that—1. All varieties of the disease proceed from the same virus. 2. Nothing can be more varied than the symptoms of rabies, each case, so to say, having those proper to it; and there is every reason to believe that their characters depend upon the nature of the points of the nervous system, the encephalon and spinal cord, wherein the virus is localized and cultivated. 3. In rabid saliva, the virus being associated with various microbes, inoculation with it may give rise to three kinds of death,—through the microbes of the saliva, the excessive secretion of pus, and rabies. 4. The medulla oblongata of a person dying of hydrophobia, as well as that of any animal dying of rabies, is always virulent. 5. The rabid virus is not only met with in the medulla oblongata, but also in all parts of the encephalon. It is also found localized in the spinal cord, and frequently in all parts

of the cord. As long as the structure of the encephalon and spinal cord is not invaded by putrefaction, the virulence persists there. 6. In order to induce rabies with certainty and rapidity, recourse must be had to the inoculation, by aid of the trephine, of the surface of the brain, within the cavity of the arachnoid. The suppression of a prolonged duration of the period of incubation, and the certain appearance of the disease, are also secured by the introduction of the virus into the circulation. By the employment of these methods, so favorable to the experimental study of the disease, rabies may be made to appear at the end of six, eight, or ten days. 7. M. Pasteur and his assistants have met with cases of the spontaneous cure of rabies, but only when the earlier rabid symptoms have appeared, and never after the acute symptoms have ensued. They have also met with cases of disappearance of the early symptoms, with a recurrence after a long time (two months). The acute symptoms have been followed by death, as in the usual course of the disease. 8. In one of their experiments on three dogs inoculated in 1881, two of the dogs took the disease rapidly and died, but the third, after having manifested the early symptoms, recovered. Inoculated again, on two occasions in 1882, by means of the trephine, it did not become mad, so that the rabies, though benign in its symptoms, did not undergo relapse. He claims, in conclusion, that he has four dogs at present which cannot take rabies, having been protected by inoculation of the virus. Should these statements receive confirmation from more extended experiments, and satisfactorily demonstrate the fact that rabies in the dog may be prevented by inoculation, the question of the stamping out of the disease is easily solved, since man only is liable to contract the disease from a rabid animal, and the means of opposing its development in the dog would almost rid man of this terrible scourge.—*The Medical Times and Gazette*.

**THE HYGIENIC TREATMENT OF ALBUMINURIA.**—The importance of hygiene in the treatment of Bright's disease has been recognized by all authorities upon the subject. The most recent important contribution to the subject is that by Senator in an address before the Berlin Medical Society (*Berliner Klinische Wochenschrift*, No. 49). He does not regard the loss of albumen as the most serious feature in the case, but it is important in so far as it aids our prognosis by indicating the amount of structural change suffered by the kidney. As regards the treatment of albuminuria, Senator points out the general uselessness of drugs in this regard, and dwells particularly upon the imperative importance of hygienic questions. With reference to feeding, the need of frequent rather than full meals is mentioned. As regards the choice of food, eggs and meat should be given sparingly.



Lichtheim has pointed out that the use of food rich in proteids may lead to an increase of the urea in the blood, with its possible consequences. Fleischer has proved the same for phosphoric acid, and Senator, by induction, extends the idea so as to include the other end-products of the metabolism of proteid bodies. In consideration of the inability of the diseased kidneys to separate and remove these waste products, he recommends the use of meat poor in albumen,—veal, poultry, and white flesh generally, including fish; and the less albuminous vegetables are preferred, such as greens, salads, fruits, etc. The digestive powers of the individual must be taken into consideration, however, and the use of fatty elements will depend upon the patient's ability to assimilate them. Spirits and beer are interdicted, but red wine is usually allowed. Spices and strong aromatics should be avoided. Milk is especially valued as a diet, and may be associated with white bread as a milk cure. Mineral waters and baths are beneficial in some cases, the latter having their chief effect on the skin. Due care of the skin, bodily rest, and the value of fresh air are insisted upon; but, as much physical exercise is injurious, carriage-exercise is the proper substitute. The good effect of a change of climate is often very noticeable, which is not attributable solely to change of air and water. In warmer regions there is an additional advantage observed in the fact that the diet is more vegetable than animal, and the southern dry climates, such as the Riviera or Cairo, are preferred.—*Medical Times and Gazette.*

### MISCELLANY.

THE PHILADELPHIA NURSE REGISTRY BUREAU.—We take the following interesting extracts, showing the mode of carrying on the Directory, and illustrating its usefulness, from the first annual report of the committee on the Directory for Nurses, presented to the College of Physicians of Philadelphia, December 6, 1882.

The Directory was formally opened May 15, 1882, though it had really been in operation since May 1. With regard to the details of management the following items of information are given:

The "application blank" for nurses requires a statement of the name, age, address, qualifications, kind of nursing preferred, rates of charge, and both medical and family references. If the replies from the persons referred to are satisfactory, the nurse is registered on the payment of a fee of three dollars. This fee is paid but once; up to January 1, 1883, it has been only two dollars. Moreover, detailed inquiries are sent both to the physician and the family after every engagement is terminated, in order to learn more and more of

the nurse's qualifications and faults, if there be any of importance.

The following are the rates of charge adopted for information leading to the engagement of a nurse:

|   |        |
|---|--------|
| Between 7 A.M. and 6 P.M.   | \$1.00 |
| Between 6 P.M. and 10 P.M.  | 2.00   |
| Between 10 P.M. and 6 A.M.  | 3.00   |
| For wet-nurses, uncertified   | 5.00   |
| For wet-nurses, certified (after careful medical examination of mother and child) | 10.00  |
| For finding and sending a nurse, an additional dollar.                            |        |

Up to December 1 the number of applications for registration has been 296. Fully registered, 213; approved and awaiting registration, 17; disapproved, 19; stricken from the roll for grave faults or defects, 2. Of the registered nurses there are 26 males and 187 females; 35 graduates of training-schools; 165 non-graduates; manipulators, male and female, 11; cuppers and leechers, 3.

The number of calls for nurses has been 342 during the seven months, an average of about 50 a month. It has furnished as many as eight in a day, and five to a single family.

Regarding the nurses' charges, it is said that the Directory is in no sense only for those who desire the highest-priced nurses. The needs and emergencies of sickness know no distinction of purse or class. It provides promptly and cheerfully for the wants of all. The Directory has had a large number of nurses, many of whom have had a very large experience, who only charge from five to eight dollars per week. It has, however, nothing to do with the rates charged by the nurses, save to register them for the information of applicants and to see that nurses do not charge beyond these registered rates. In many cases they charge less.

The Directory has not only male and female nurses for acute illness, but nurses for invalids, manipulators, cuppers and leechers, etc., on the register. A large number of the nurses register for contagious diseases and insanity.

One of the most important results achieved through the Directory is the promptness with which calls to grave emergencies are met. Cases of accident, sudden illness, insanity, smallpox, etc., often brook no delay; and yet under the old system they were the very ones in which it was most difficult to procure good nurses, and especially with promptness, usually within two or three hours.

Two cases of illness occurring on the same evening will perhaps best illustrate the advantages of the Directory over the previous unsatisfactory methods of obtaining nurses. At 7.20 P.M. a gentleman from Wilmington, Delaware, came to the office to obtain a nurse for his wife, who was urgently sick after confinement. His return train left at 8.30 P.M. By 8.15 he was in the station with a most experienced nurse, who had a ten weeks' engagement as a result. The same evening at 10 P.M. a gentleman in the city telephoned for a male nurse immediately for a sudden emer-

gency. The telegraph and messenger service were at once invoked, and by 11 o'clock the nurse was on his doorstep, and stayed with him for three weeks.

In conclusion, the committee especially calls the attention of members of the medical profession to the great service the Directory may render them in speedily procuring trusted and skilled nurses for their patients, and asks their hearty support in its work. Only thus can the Directory be made self-sustaining and reach its highest efficiency. The amount of time and trouble it can save physicians, who formerly had to search all over town for a day or more to get a reliable nurse, is in itself not a slight advantage. Moreover, if they wish any one of a number of nurses whom they already know and like, they have only to furnish a list of such names, and if any one of them be disengaged the secretary will send that one in preference to a stranger.

While Philadelphia has profited most by the establishment of the Directory, the neighboring towns and villages and summer resorts have been especially benefited. In seven months it has furnished fifty-one nurses outside of Philadelphia, of whom twenty-three have been sent beyond the limits of the State.

It has also undertaken to supply wet-nurses; thirty-five applications have been made, but it has been able to supply only thirteen, and the report calls especial attention to this fact in order to obtain many more of this class of nurses.

So useful have the Philadelphia and Boston Directories proved, that Washington, Cincinnati, Toronto, and San Francisco are taking steps to establish them there.

The Directory is open all hours of the day and night to applicants for nurses. Application may be made in person, by letter, or by telegram. Persons applying by letter are requested to enclose the full fee. Applicants out of the city should prepay the fee and the price of a ticket to the applicant's address by telegraphic money order to the Superintendent, Miss Emily C. Thomas, at the College of Physicians.

TELEPHONE No. 3402.

**A SWEET ACID.**—At the last meeting of the Franklin Institute a specimen of the sulphamide benzoic acid was exhibited, which was described as a coal-tar product. It is so sweet as to suggest the possibility at an early date of the displacing of the product of the cane by some rival from the laboratory of the chemist.

**SUBSTITUTE FOR THE SAND-BATH.**—From time immemorial chemists have used a sand-bath where a temperature is to be obtained higher than that of the boiling of water or of oil. The method is not wholly rational, however, sand being a very bad conductor of heat. Herr Kristalba has lately recommended the substitution of pounded fragments of graph-

ite. They let the heat pass much better, do not oxidize, and do not soil the enclosing vessel. *L'Electricité* commends the method to electricians who have to make researches in thermo-electricity, adding that small shot of iron would serve nearly the same purpose. For more intense heats, it is known, melted lead can be used.

**A WELCOME COMPLIMENT TO A PHILADELPHIA AUTHOR.**—The popular treatise of Dr. Louis A. Duhring upon Diseases of the Skin has recently appeared in a French translation by Messrs. Barthélemy and Colson. M. Alfred Fournier has written a preface, and the translators have added notes.

**THE PACIFIC MEDICAL COLLEGE** has recently been re-incorporated under the name of the Cooper Medical College, as the result of a gift by Dr. L. C. Lane of a new building valued at one hundred thousand dollars. The school was asked by Dr. Lane to be called the Cooper Medical College, after Dr. E. S. Cooper, one of the fathers of medical education on the Western coast. The new school has adopted an obligatory three-years' course.

**CHILBLAINS AND FROSTED FEET.**—In the milder forms of frost-bite, carbolic acid in the form of wash or ointment is very useful; carbolized cosmoline is especially adapted for this purpose. In the more severe degrees, an army surgeon, in one of our exchanges, recommends pencilling with a solution of equal parts of nitrous acid and peppermint-water once or twice daily, which he had found very efficient for troops. A writer in the *Medical and Surgical Reporter* speaks with great confidence of applications of balsam of copaiva, which he claims, from experience, gives very prompt relief.

## NOTES AND QUERIES.

EDITOR PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—I received a notice the other day from a druggist that hereafter all his preparations would be made of the standard strengths of the new Pharmacopœia. A leading druggist told me to-day that he intended, for some time at least, to adhere to the old standard,—that of 1870. You will naturally see by this that the same prescriptions sent to these two stores will receive a different interpretation, and as it is impossible for us to know what standard will be followed by all the drug-stores of the city, and equally impossible to compel all our patients to deal at particular stores, the physician's position becomes a difficult one. Will you kindly point out to me and others of your readers the proper course to follow? Are we to write the numerals 1870 or 1880 after each ingredient to our prescriptions hereafter?

Yours truly, JOHN M. KEATING.

December 29, 1882.

## OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM JANUARY 13 TO JANUARY 20, 1883.

No change.